

ccj

# COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



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**REO MOTORS, INC.**  
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SEE THE POWERFUL, NEW MODEL F-50 REOS WITH THE MOST  
EFFICIENT 50,000-LB. G. C. W. TRUCK ENGINE EVER BUILT



## "P-I-E has standardized on Dodge for its San Francisco-Oakland fleet"

### Why new DODGE "Job-Rated" TRUCKS are the BIG CHOICE of BIG FLEETS

#### HIGH-POWERED FOR THE LONG PULL!

You can count on new Dodge trucks to meet tight schedules! Seven big engines—three of them all-new—from 100 h.p. to 171 h.p. Twin carburetion and exhaust systems in heavier models. With Dodge you're sure of the *right* power for your job. Not too little power—that causes unnecessary strain and wear on the engine. Not too much power—that costs you money in wasted gas and oil. The right power, plus famous Dodge handling ease, saves time and money!

#### TRIM HAULING COSTS TO LOWEST LEVEL!

New Dodge "Job-Rated" trucks offer high compression ratios to help you get greater fuel economy. Four-ring pistons and chrome-plated top rings lengthen the time between oil changes. Positive-pressure lubrication, floating oil intake and two fuel filters are among the features that cut upkeep—keep your trucks on the road and on schedule! Get more truck for your money—see or call your friendly Dodge dealer soon.

... says **C. E. JOHNSON**, Executive Vice President, Pacific Intermountain Express, 299 Adeline St., Oakland, Cal.

"Pacific Intermountain Express now owns and operates a fleet of fifty-four Dodge 'Job-Rated' trucks in the San Francisco-Oakland Bay area. We have found that the greater horsepower and increased cubic-inch displacement of our new Dodge units are ideal for the hilly terrain of this territory.

"From the company standpoint, maintenance costs for Dodge are extremely low and operating economy is most rewarding. From the driver standpoint, our Dodges handle easily and have exceptional flexibility in alleys, on narrow streets, and in traffic. These are some of the reasons why P-I-E has standardized on Dodge for its Bay area pick-up-and-delivery fleet ... and why we are going to keep on buying dependable Dodge trucks in the years to come!"

# DODGE

*"Job-Rated"* TRUCKS



# PERMATEX FORM-A-GASKET®

"FOR HOSE CONNECTIONS, YOU CAN'T BEAT IT!"



says: **RAY BROWER**  
of Brower Bros. Auto Repairs  
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"We use Aviation Form-A-Gasket No. 3 for all hose connections. While it makes a perfect seal, it does not *cement* the rubber to the metal. Form-A-Gasket resists all types of anti-freeze solutions as well as gas, oil and hot and cold water. The brush top makes it easy to apply."

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\$5.00**

We are giving away a bunch of five-dollar prizes each month during 1953 for best suggestions on the use of Form-A-Gasket. It's a cinch to win one. For all particulars, ask your jobber's salesman for an entry blank or write to us for one.



**3 TYPES  
FOR  
YOUR CONVENIENCE**

No. 1 sets quickly, dries hard. No. 2 sets slowly, is non-hardening. No. 3 Aviation is a brushable liquid that sets to a paste. All three make leakproof, pressure-tight seals in threaded, hose and flange connections.

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# COMMERCIAL CAR

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## COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

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## ccj READER DIGEST

### The Pa. Plan for Cooperative Safety Patrol

Coordinated by Pennsylvania Motor Truck Assn., a volunteer organization of 189 highway observers watches trucks on the highway, keeps management informed. In the first three months of this year, patrol members from 10 states have made 2500 reports in 13 states on trucks and buses domiciled in 28 states. Learn how you can participate in this effective accident reducer. Page 64.

### Capital Earnings Guide Vehicle Replacement

Management Counsel Joel Dean takes a look at 10 methods of deciding when to replace vehicles, says purchase of a new truck is a capital expenditure not an expense item, concludes that expected operating cost of new truck must produce sufficient saving over expected operating cost of old truck to justify replacement. Here is how he determines those costs. Page 66.

### Selective Concentration Cuts Accident Rate

Making a safety program accomplish the most with available funds is the goal of Howard Baker, Montreal Transportation Commission safety director. Coordination of data from detailed studies of hazardous intersections and locations, pinpointing the nature of the most recurring accidents and careful analysis of the most accident-prone employees does the job for this urban transit fleet. Page 68.

### PIE Sliced Workmen's Compensation Loss 47%

Pacific Intermountain Express's loss ratio hit 62 per cent in 1949, challenged Safety Director K. N. Beadle to do something about it. Here he reports in detail what P.I.E. did to cut that loss, shows the savings possible when an effective training program works to slice industrial accidents in the fleet field. Page 70.

### There's Not Much Excuse for Vehicle Fires

Analysis of 2208 vehicle fires reported to the Interstate Commerce Commission indicates that it is easier to prevent them than it is to fight them. Following up on shop fire prevention and control (Jan., page 86), this study discusses what should be added to your driver training and preventive maintenance programs to prevent vehicle fires. Page 74.

### National Materials Handling Show

In the over 300 exhibits at the Fifth National Materials Handling Show, held last month in Philadelphia, there were many pieces of time and labor saving freight handling equipment of interest to fleetmen. Space does not permit a complete summary, but here is a brief review of 21 of the latest models selected as being of particular interest to bus and truck fleet operators. Page 86.

## There's No Such Thing As Normal Conditions In the Fleet Business

Even on long, hot climbs (like this famous "Seven Mile Grade" on U.S.



#41) the BLUE STREAK ACC-560 Coil will always make the grade. This coil is especially designed for trucks and buses. Not only does it dissipate heat as fast as it is generated because of its aluminum housing and large horizontal fins, which expose the greatest possible cooling surface to the

swirling air currents from the fan, but it actually heats up less than any other coils usually installed on trucks. The perfect balance between the electric and magnetic elements and the heavier gauge wire used in the winding enables it to deliver hotter sparks without high resistance. Pair this coil with the BLUE STREAK U-2000 super-sealed condenser and you've got a team that can mean the difference between making that grade and not. Standard Motor Products, Inc., 37-18 Northern Blvd., L. I. C. 1, N. Y.



# Blue Streak



PIONEER IN HEAVY DUTY IGNITION

# For Public Service

in behalf of modern highways

We are proud of being awarded the 1952 Silver Anvil Trophy of the American Public Relations Association for meritorious public service in behalf of a modern highway system for America. The "Better Roads" campaign, sponsored by Goodyear in national magazines and newspapers, played an important part in the current nationwide drive for improved highway transportation facilities. It is one more example of the wide range of Goodyear's activities to be of greater service to every user of motor transportation.



"MOTOR TRANSPORTATION IS THE LIFEBLOOD OF AMERICA. THE HIGHWAYS ARE ITS ARTERIES—WE CANNOT LET THEM HARDEN."

*P. Mitchell*

Chairman of the Board, The Goodyear Tire & Rubber Company, Inc.

(This timely quotation keynoted Goodyear's award-winning "Better Roads" campaign.)

# GOOD YEAR

America needs better, safer roads. Let's bring them up to PAR



# The OVERLOAD

E D I T O R I A L C O M M E N T

## Restricted Streets—An Answer to City Traffic

ALL who read this magazine are familiar with signs restricting certain streets from certain types of traffic. Some beat around the bush with such belabored phrases as "Burdened Vehicles." Others bluntly state "Trucks Prohibited." All in essence say:

### "CLOSED TO COMMERCIAL TRAFFIC"

Basically there is nothing wrong with such a sign. It helps speed the flow of passenger car traffic; guards cheaply built streets from undue weight; protects adjacent property owners from the noise and bustle of heavy vehicles.

But how many have given thought to the possibility of a similar sign on different streets? It might well read:

### "CLOSED TO ALL PASSENGER CARS"

Actually the local transit people have given much thought to such a sign. They know how much it would speed the flow of their buses, rail cars and trackless coaches and they have figures to prove it.

Just recently E. E. Kearns of the General Electric Company restated some of them in dramatic form at an American Transit Association meeting in Washington. Said Mr. Kearns:

"One surface transit vehicle carries as many people as one city block crammed full of automobiles.

"One surface transit line at full capacity can carry as many people as five streets jammed with private cars.

"One four-track rapid transit line is equivalent to 15 eight-lane Freeways."

Unfortunately dreams of such a Utopia should quickly be supported by sobering realities. For one thing no transit property has yet come close to obtaining such restrictions. For another it would

have to guarantee greatly improved service so that passengers could be handled with the speed, convenience, flexibility, and comfort to which they have been accustomed in their passenger cars.

On top of that there is no transit line we can think of which has sufficient density of traffic, present or potential, to possibly justify exclusive use of any given street.

So enter the lowly truck. Could not the same means of speeding local transit also be the means of speeding commerce? If trucks and transit vehicles could share the *same* restricted streets, both could greatly increase efficiency.

Even on the narrow three-lane streets that are so familiar in our older cities, through trucks and transit vehicles could share two lanes. The third, unhampered by passenger car competition, could be utilized for essential pick-up and delivery.

Of course there are many problems to be solved before such an idea could be realized. The squawk of local merchants would *have* to be resolved by the speed and comfort in which transit could bring customers to their doors. The truckers would *have* to totally eliminate double parking even for momentary stops. The screams of temporarily inconvenienced John Q. Motorist would *have* to be logically and factually answered. And so on ad infinitum.

But the point is that it *could* be done. And it might be a whole lot easier to accomplish the job if the owners of some 90,000 transit vehicles could be supported by the owners of approximately 9,000,000 trucks.

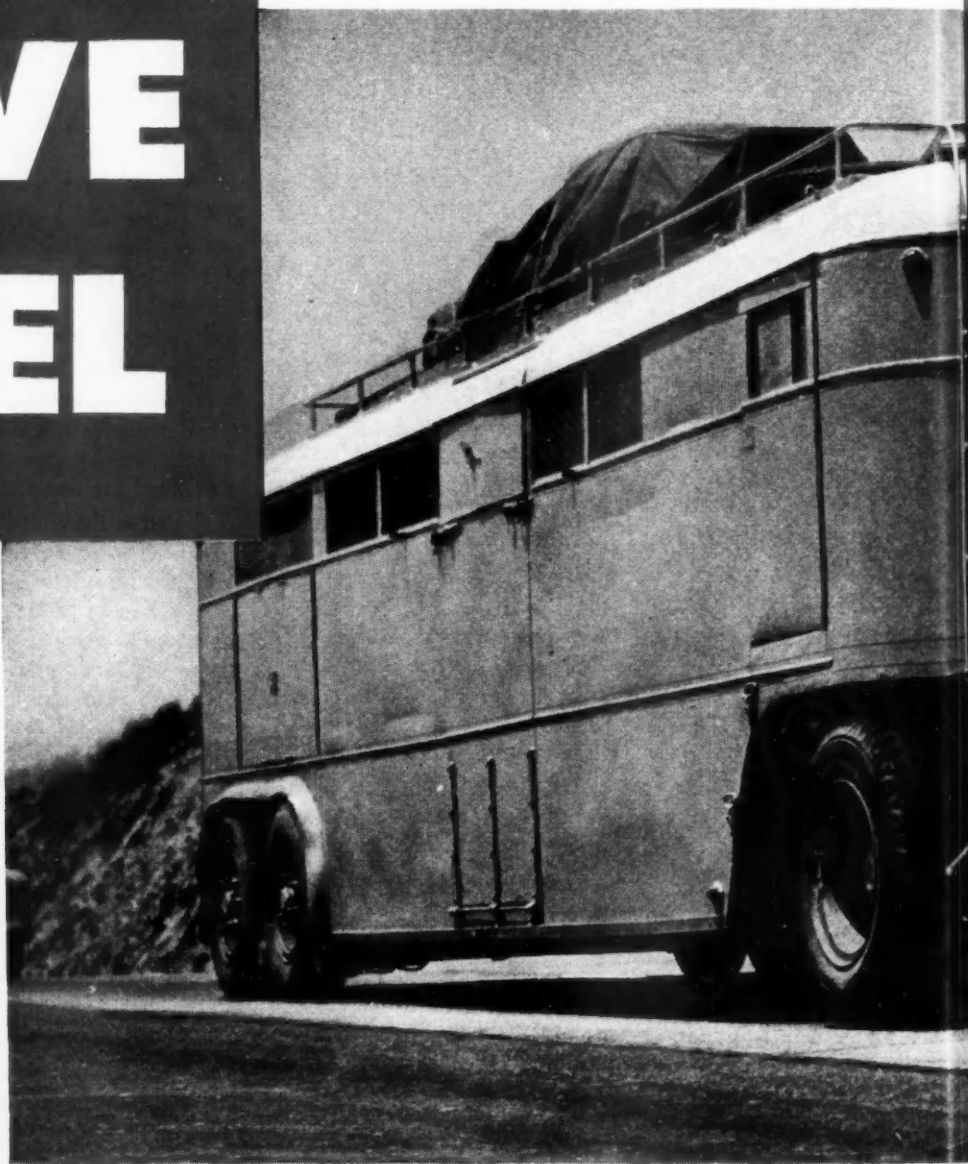
Instead of tackling their traffic problems as separate unrelated items why could not the truckers and the bus operators join forces in a common cause? Once agreed on their joint campaign, they could extend a full measure of needed give-and-take with passenger car interests and the City Fathers.

Bart Pawson  
Editor

# HOW TO SAVE FUEL

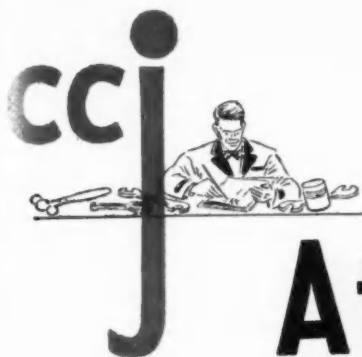
**SURE WAY** to keep fuel consumption low is to keep your engines clean. Lubricate with *Texaco D-303 Motor Oil*. It is heavy duty — fully detergent and dispersive. It has extra-high resistance to oxidation, and keeps harmful carbon, gum and sludge out of your engines. Thus, rings stay free for proper compression and combustion. You get full power and use less fuel.

Because it cleans as it lubricates, *Texaco D-303 Motor Oil* also adds substantially to the life of



# TEXACO





# At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by MURRAY SIMKINS Managing Editor

## Improper Condenser Installation

AS is known, dwell variation in distributor point adjustment should not exceed two degrees. Some mechanics have condemned some of the Delco Remy distributors for exceeding this limit when the trouble was caused from improper mounting of the condenser.

On some types of condensers the body may slip in the mounting bracket permitting contact with the vacuum advance arm. This causes unusual movement of the distributor breaker plate, thus changing the dwell of the points. Be sure to watch for this before rebuilding a distributor.

## When Brake Drums Crack

IT is probably common knowledge to most operators that persistent brake drum cracking on trailers can be caused right in the parking lot. However, many are learning this the hard way. Recently a fleetman told us that he had lost a considerable amount of drums due to the hot drums contracting upon cooling after a run. When trailers are parked, the emergency valve applies the brakes on a hot drum, and it's got to move but can't because of the shoes. Result, sometimes broken drums.

Some fleets have installed reinforced drums to correct this condition. You may want to reduce air pressure in the tank and chock them. At least consider this possibility with recurring brake drum failures on trailers.

## Can You Use a Dynamometer?

THIS is no attempt to sell you a dynamometer. Admittedly every fleet cannot justify the cost of one. But where you can run at least a couple of trucks a day through a dynamometer test, you should be looking at them.

Bus operators, especially find the dynamometer valuable in several ways. First, it catches maladjustments before they cause delays. It saves considerable time over a road test. It makes possible the utilization of every horse built into the engine.

And that's a big factor as far as driver relations are concerned. Bus properties emphasize this angle. You can prove to a driver that it is either right or wrong in his complaints. After a bus (or a truck) passes over this test, the driver has no more complaints—and your headaches are reduced in direct proportion.

## Have You Tried Hot Spray?

THE subject of hot spray painting comes up again.

A certain few operators are not as yet convinced that this type process is practical outside the factory. Fleetmen we have checked with, however, insist that hot spraying is the answer to painting problems. They say that they are getting excellent durability with one coat, that no prime coat is necessary, and that a high gloss is possible.

Another user states that he is saving 50 per cent in labor costs and is getting a better job with hot spray. His satisfaction arises from the fact that problems peculiar to painting are minimized. For example, there is less chance for dust to interfere. With the reduced air pressure required, fog and mist are reduced so that working conditions are more favorable.

## How is Your Brake Maintenance?

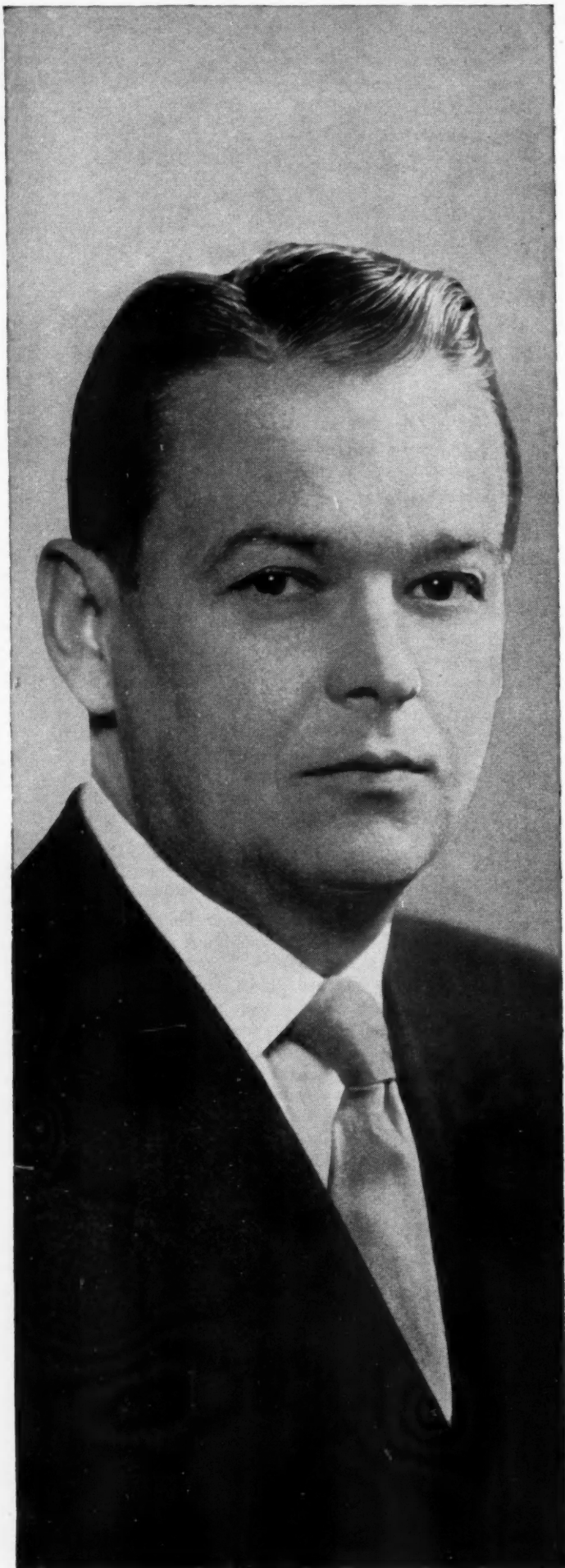
LATEST ICC reports analyzing mechanical defect accidents tells about the same old story in spite of an almost universal attempt by fleets to improve the level of their maintenance. Tires, brakes, lights, fuel lines, engines—in that order, were the chief offenders.

According to the report "an overwhelming majority resulted from brake failures which could have been corrected or prevented." Leaks, bad adjustment, valve deterioration and hose failures accounted for most of the accidents.

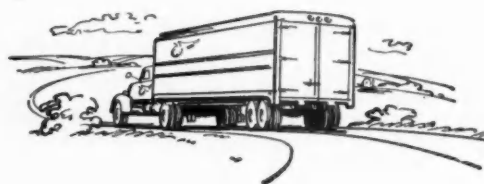
The study shows that brake accidents have increased from 188 in 1942 to 833 in 1951, accounting for 40.7 per cent of all mechanical defect accidents. The following comprises ICC's specific recommendations with respect to brake accidents:

It is the carrier's obligation to make certain that procedures are installed and followed and mechanics and drivers are properly trained to assure that such actions are followed. Decelerometers and test gauges should be standard equipment for every carrier performing his own brake maintenance. Drivers should be carefully instructed to recognize defective brakes. On hundreds of reports, drivers have stated that their vehicles have jackknifed when the brakes were applied and yet neither the driver—nor the carrier—have expressed the slightest suspicion that the brakes were defective. Properly-balanced brakes do not behave in this manner and the sooner drivers and carriers realize the correctness of this statement the sooner hundreds

(TURN TO PAGE 12, PLEASE)



# Enter



Our annual A.T.A. National Truck Safety Contest is designed to help you help yourself in promoting safety in your fleet. Be sure to enter your fleet and help all of us maintain the greatest safety record in the world! On behalf of the American Trucking Associations, I want to thank Auto-Lite for its personal awards, which each year play an important part in our program's success.

*Walter Henry*  
PRESIDENT

AMERICAN TRUCKING ASSOCIATIONS, INC.

.....

## AUTO-LITE

*Ignition Engineered*  
**SPARK PLUGS**



# 1953-54

## ATA NATIONAL TRUCK SAFETY CONTEST

Promote safety in your fleet this easy way. Fill out the contest coupon below and mail it today. There's no extra work, no additional expense, no special records to keep, no A.T.A. membership necessary. There are sixteen classifications with both local and long distance divisions, so you compete with other fleets on an equal basis. A safe fleet saves money and boosts profits, so enter your fleet today!

### THE ELECTRIC AUTO-LITE COMPANY

Merchandising Division  
Toledo 1, Ohio      Toronto, Ontario

### THE ELECTRIC AUTO-LITE COMPANY

Merchandising Division, Toledo 1, Ohio

1953-54 ATA SAFETY CONTEST COUPON

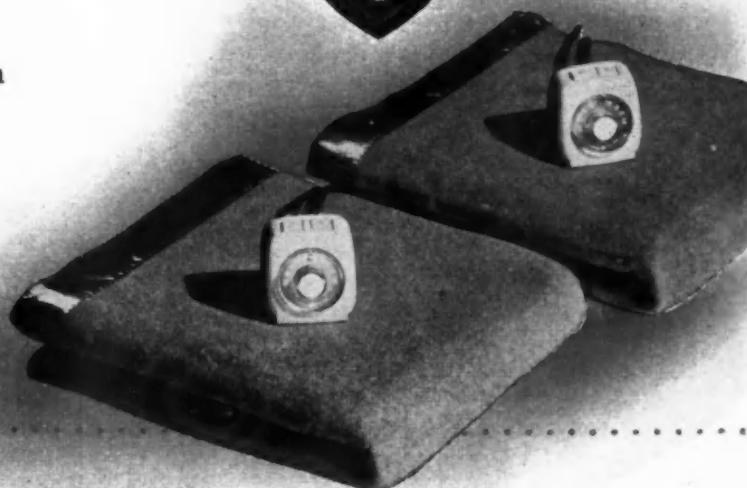
Please give us full information on how we can use the National Truck Safety Contest and prizes to promote greater safety in our fleet. We understand no special records, fees or membership are required.

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_

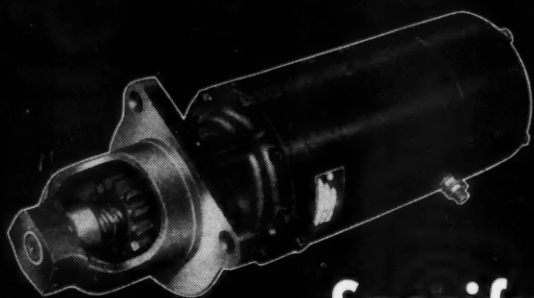
COMMERCIAL CAR JOURNAL, June, 1953



TO THE WINNERS - two twin-bed Rose G-E Sleep-Guard Electric Blankets with bedside control, plus engraved plaque with winner's name. Drivers of winning fleets will receive billfold size Safety Driving Certificate.



# GET QUICK SURE STARTING



Specify  
**Leece-Neville**

## CRANKING MOTORS

You're sure of more runs, fewer layups, with L-N Cranking Motors on your fleet. High torque makes instant breakaway, even with cold, stiff engine. Fast cranking speed insures a quick start. And famous L-N rugged construction guarantees unmatched reliability and long life. For 12 volt and 12-24 volt series-parallel systems. Also higher voltages. It will pay you to specify L-N.

### Out front over 43 years

Since 1909 Leece-Neville has been in the forefront of invention, development and perfection of automotive electric equipment. The first generators and cranking motors used as standard equipment on automobiles were built by Leece-Neville, who also brought out the first third-brush generator. Today, with outstanding engineering and production facilities, L-N is the acknowledged leader in design and manufacture of special and heavy-duty electric units. The Leece-Neville Company, Cleveland 14, Ohio.



ALTERNATOR SYSTEMS • GENERATORS  
CRANKING MOTORS • REGULATORS  
SWITCHES • SMALL MOTORS



## At Your Service

Continued from Page 9

of accidents will be avoided. The same statement may be made with reference to the following—air and vacuum lines do not have to leak; large vehicles can be made to stop within 30 feet from 20 miles per hour; and parking brakes are available to hold vehicles stationary. On many of the carrier's reports of accidents due to parking brake failures the carrier states that it was the driver's fault because he "failed to chock the wheels." This statement makes it readily apparent that the carrier realized the parking brake was inadequate and, for that reason, the carrier is equally responsible. Particularly to be condemned as a cause of accidents is the practice of placing reliance in parking upon the trailer-control valve. This practice can be overcome to a greater extent by driver education but carriers can also materially assist by providing adequate and properly-maintained parking brakes. Manufacturers can also assist in this matter.

### Air Suspension for GM Coaches

GENERAL MOTOR'S air suspension system, described in November in CCJ, will be installed as standard equipment on the 37-, 45- and 51-passenger transit models and the 45-passenger suburban models.

Other features of the new coaches are: redesigned front stepwell, shorter turning radius, safety glass as standard equipment, and dual mufflers.

### Electronic Diagnosis

RAY KING, assistant service manager of Diamond T Motor Car Co. in Chicago, is using a portable electronic stethoscope in locating mechanical troubles. He says it takes the guesswork out of diagnosis. Noises can be isolated quickly without any lost motion.

The Elec-Detec now is used to check all rebuilt engines before they leave the test block. In this way fallibility of the human ear is eliminated. Places can be probed that would otherwise be inaccessible. The engine can be running at high speed and still a diagnosis can be made quickly and conveniently. Trouble can be located by turning units by hand since the equipment is sensitive enough to detect sounds at low speeds that could otherwise be heard only at high speeds.

If your mechanics like the plain old screwdriver for locating engine noises, they will certainly appreciate the electronic device. Might save some misjudgments too.

### Simplified Flaw Inspection

SEVERAL fleetmen have indicated interest in Turco's Dy-Check flaw location kit. While it is not a substitute for Magnafluxing, certain parts can be checked (TURN TO PAGE 14, PLEASE)

# BLOWOUTS, BRUISES, BREAKS AND CHAFING ENDED

## Lee Know-How Did It!

This is the story of a fleet in the Southwest, where the trucker was using the correct tires but still was having a heap of trouble. Lee helped him overcome a very expensive and curious condition.

### PROBLEM

The trucks operating out of four of this hauler's five branches were getting good mileage with Lee highway truck tires.

But the fifth was a dog! Everything that can happen to tires was happening . . . blowouts, impact breaks, bruises, bead chafing.

**Operation**—Hauling steel and other building materials

**Equipment**—Straight trucks and tractor semitrailers

**Axle Loads**—Normal for the tire size and ply rating used

**Speed**—Fast

**Roads**—Very abrasive black top, high crowned

**Tires Used**—Regular highway truck type

### RECOMMENDATIONS

Lee first checked truck loads and found they were normal.

**Because** appearance of tires still indicated either overload or underinflation, Lee checked all air pressures.

It turned out that most tires had only one-half the necessary pressure. The branch was not checking pressures itself, but relying on a local service station. The attendant at the station didn't bother with a gauge, but checked the air by kicking the tires with his cowboy boots. This was considerably less than scientific for anything except finding a flat.

**Because** you cannot get normal tire mileage without proper in-

flation, Lee recommended that the trucker install a compressor at this branch and that all tire maintenance be handled there on a systematic basis. This plan was adopted.

### RESULTS

Excessive tire failures were eliminated.

Long-distance emergency trips to fix tires became a rarity instead of an everyday event.

Hauler now gets full service from original treads.

Carcasses can be recapped for maximum mileage at low cost per mile.

Wherever tires are not giving normal service there are good reasons, and Lee has helped hundreds of haulers, large and small, to find those reasons and get rid of chronic tire trouble. Whatever your tire problem . . . maintenance procedures, roads, loads, wheel design, tire design . . . bring it to Lee. Lee can help you get the most for your tire dollar.

Lee Rubber & Tire Corp., Dept. 2F  
Conshohocken, Pa.  
Please send me information about your  
special engineering survey for truck fleets.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

| H.D.<br>Commercial   | 5-Rib<br>Highway | 7-Rib<br>Highway | Extra Tread—<br>Delivery Service | Logger—<br>Rural Service   | Cleat<br>Rib | Cleated<br>Tread  | Cleated Tread<br>Special |
|--|------------------|------------------|----------------------------------|--|--------------|-------------------|--------------------------|
|  |                  |                  |                                  |  |              |                   |                          |
| LEE RUBBER & TIRE CORPORATION  |                  |                  |                                  |  |              | CONSHOHOCKEN, PA. |                          |





## HEAVY DUTY CLUTCH PLATE

- standard-drilled extra-heavy facings wear better
- heat-treated multiple-riveted hub & disc last longer
- self-aligning splines install easier

Write for Name  of Nearest Jobber

*Accurate* PARTS MFG. CO.

12435 EUCLID AVENUE • CLEVELAND 6, OHIO



## At Your Service

Continued from Page 12

very conveniently and quickly with this portable set up. It is recommended that some sort of flaw inspection be incorporated in your maintenance program in the interest of safety and longer parts life. Certainly one advantage of Dy-Check is its simplicity of application.

If you use it, simply wipe the area or part being inspected with a rag saturated with Dy-Check remover. The brilliant red liquid, Dy-Check Dye penetrant, is then brushed onto the surface being inspected. After being allowed to dwell long enough to enter any defects that may extend to the surface of the metal, the excess penetrant is removed. This may be accomplished either by wiping with a rag saturated with the remover, or by brush application, followed by a water rinse, if water is available.

Since, to insure accuracy, it is a necessity to apply Dy-Check Developer by spray, two pressurized sprayers of developer are provided. The developer is "fogged" along the surface being inspected until a thin, even white coating of developer has been applied. The developer dries almost instantaneously, pulling the hidden red penetrant to the surface at locations where flaws exist. Cracks are indicated as brilliant red lines, while red dots indicate porosity. Depth of defects is indicated by richness and speed of bleed-back.

### To Match Dual Tires

A HANDY new dual tire matching caliper is available from United States Rubber Co. The tool may be used to insure proper matching when installing new tires or when rotating tires. Also, where a trucker stocks recapped or repaired tires, he can identify them by measurement for ready reference when matching them with the tires on his trucks.

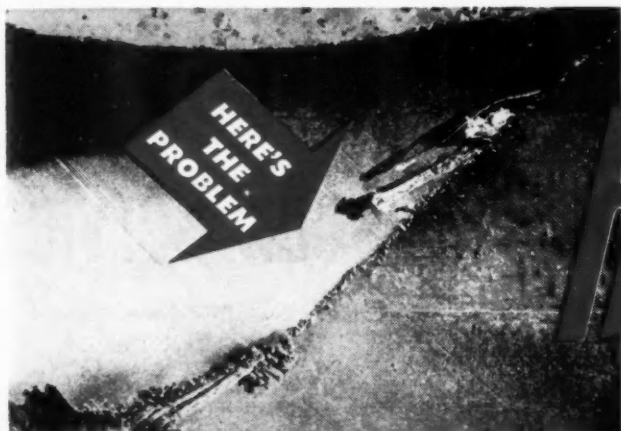
### Save Time in Tire Work

ENGINEERS at The Autocar Co., Ardmore, Pa., have developed a pneumatic tire and rim mounter for heavy-duty assemblies. The device can be adapted to the fleet shop and will cut the work required in mounting rims and tires in half. Complete plans for the machine can be obtained by writing Autocar.

Set over an 18-in. pit, 24 in. in diameter, is a stepped-down, circular casting which can hold wheels or demountable rims 20, 22 or 24 in. in diameter. The bottom of this casting is at floor level.

Fastened on a plate in the pit below the floor level are a pair of Westinghouse air-brake cylinders, 6 in. in diameter, with a 2 $\frac{3}{4}$ -in. stroke and a capacity of 1500 to 2000 lb psi. Both brake cylinder arms are fastened to an 11-in. cross-piece of  $\frac{1}{2}$ -in. steel. A 2-in. steel spindle rod attached to the center of this cross-piece rises through the center of the stepped-down

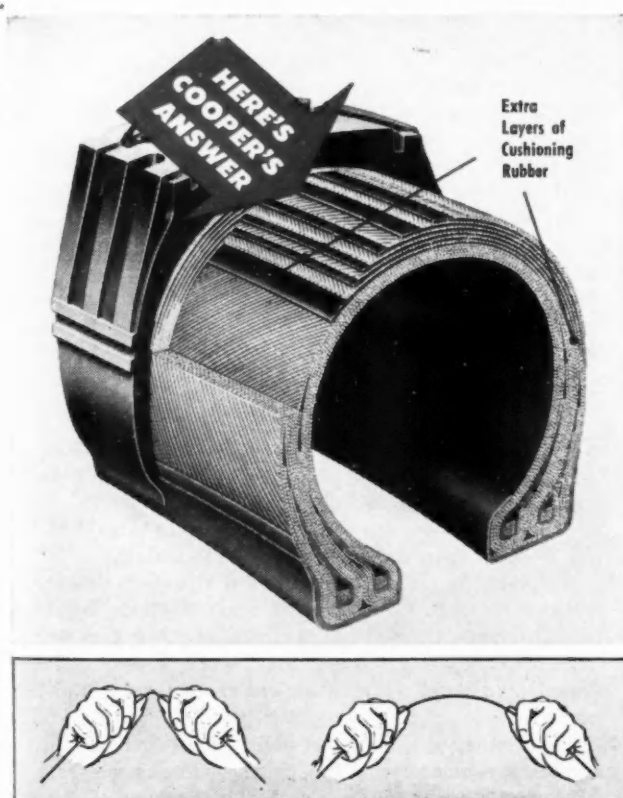
(TURN TO PAGE 18, PLEASE)



Abnormal Flexing Made This Tire A Heat Failure

# heat-flex

# failures stopped!



## New Cooper DSC Construction Can Cut Heat-Failures As Much As 50% . . . Guarantees More Mileage, More Recaps

The Cooper DSC cross-section at left shows why *heat-flex* failures can be stopped before they start. Extra layers of special cushioning rubber are built directly under the tread, beyond the shoulder areas, far down the sides.

The result is a uniformly stronger tire with better cushioning all the way through. There are no weak points. No localized flexing to generate abnormally high heat. That's why Cooper DSC truck tires run consistently cooler — don't *heat-flex* themselves to a premature and costly death.

The pay-off for you is more original miles, more recap miles on the toughest kind of hauls. And you don't pay one cent extra for the extra protection Cooper DSC construction gives. You'll find that your Cooper truck tire dealer consistently offers the best values to be had. See him soon. Cooper Tire & Rubber Company, Factories at Findlay, Ohio.

### Make This Heat-Flex Test Yourself

**Hold Hands Close Together.** Bend an ordinary piece of wire rapidly back and forth so that the flexing action is concentrated at one localized point. Notice how quickly the wire gets hot, loses its strength, breaks!

**Move Hands Farther Apart.** Bend wire as before. Notice the absence of heat because the flexing action is no longer concentrated at one localized point. Eliminate localized flexing and you cut down *heat-flex* failures. That's what Cooper DSC construction does for you.



Tires • Tubes • Batteries • Camelback Repair Materials



## New cleaner developed to simplify maintenance in garage and shop

**Oakite Composition No. 8 answers long-felt need for all-purpose solvent detergent!**

**H**ERE at last is a single material that makes short work of stubborn grease and soil on a wide variety of garage and repair shop jobs. Field tests prove it does the work of several different specialized cleaners. Oakite Composition No. 8 not only supplies powerful detergent action; it also gives you the wide margin of safety that only a cleaner usable with water can give.

In tank cleaning parts before repair or overhaul, for example—heavy, caked-on grease and oil vanish fast in a cold solution of this long-lasting material. It quickly softens and lifts ground-in grease from floors for easy, complete rinse-away with water. Diluting Oakite Composition No. 8 with kerosene for spray-cleaning chassis and motors strips stubborn soil accumulations fast, at low cost.

Used with water for general cleaning, Oakite Composition No. 8 eliminates fire-hazard. It proves safe for all metals, and has no objectionable odor.

More information in free Booklet No. 4401. Write Oakite Products, Inc., 26D Rector Street, New York 6, N. Y.



SPECIALIZED INDUSTRIAL CLEANING  
**OAKITE**  
TRADE MARK REG. U. S. PAT. OFF.  
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. & Canada

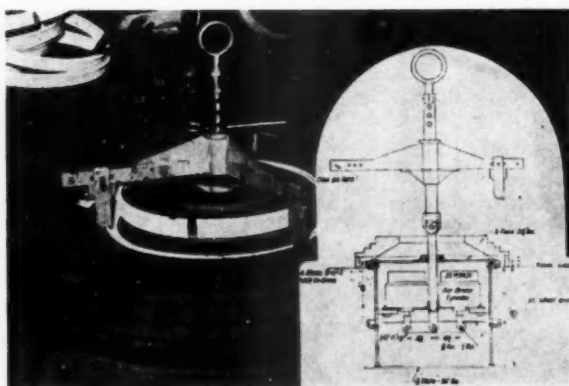


## At Your Service

Continued from Page 14

casting to about 5 in. above the floor. A  $\frac{5}{8}$ -in. cross-rod is mounted through the top of this spindle.

In mounting a tire, the operator first places a rim base on the stepped-down casting. Next, he drops the



tire on the rim base, slips the side ring on after and positions the locking ring.

Then he lowers a three-armed spider, hooks it on to the spindle rod which comes up through the center from the pit and locks the two with a quarter turn. The three spider arms notch on to the side ring and, as the operator turns on the compressed air, force it and the bead of the tire down past the locking-ring seat on the rim. With a sharp tap of a hammer, the operator seats the locking ring.

### Bolts v. Rivets

**I**NCIDENTALLY, B. B. Bachman, Autocar engineering vice-president, recently re-emphasized the company's use of nuts and bolts rather than rivets. In Autocar's recent sales bulletin, Bachman says bolts are stronger than rivets and cheaper to install.

He adds that they also withstand vibration, impact and heavier loads better than rivet construction. Rivets have a tendency to loosen, particularly when they are installed hot. Very often they work loose, rattle around and wind up with an egg-shaped hole in the frame.

Often, he says, it is almost impossible to remove the rivets and replace them. In some cases, it is necessary, where rivets are used, for a driver of a vehicle to continue operating his truck with the knowledge that rivets are loose and he can do nothing about them. He also points out that it is not uncommon in the field to find there are no facilities for replacing rivets.

### Chevrolet . . . No V-8 Engine

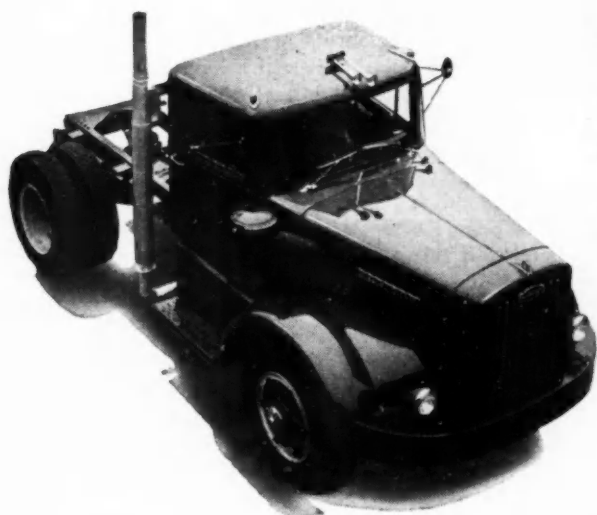
**D**ESPITE anything you may have heard, Chevrolet will not have a V-8 engine in its 1954 trucks. Such a power plant is known to be under development but is still quite a distance off.



**These two great Autocars**

**are the most wanted**

**trucks on the road today**



## THE AUTOCAR C-65-T

It's light in weight — under 10,000 pounds, ready for the road! Yet it is "heavy duty" throughout . . . strong, powerful, geared for high average highway speeds with profitable payloads.

## THE AUTOCAR DC-75-T

The lighter-weight Diesel-powered Autocar, unmatched for durability and economical performance. There are hundreds of thousands of low-cost ton-miles in this modern, long-distance highway hauler.

Any way you look at them, these Autocar tractors are the leaders in profitable hauling. For complete information about the C-65-T or DC-75-T, clip the coupon.

## AUTOCAR TRUCKS

The Autocar Company, Ardmore, Pa.

Established 1897

*Factory Branches and Distributors  
from Coast to Coast*

The Autocar Company, Ardmore, Pa.

I want to know more about the ☐ C-65-T, the ☐ DC-75-T

NAME \_\_\_\_\_

FIRM NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

NUMBER OF TRUCKS IN FLEET \_\_\_\_\_

TYPE OF OPERATION \_\_\_\_\_

3F

# WASHINGTON RUNAROUND

by KARL RANNELLS Washington Correspondent

## Explosives . . . Rights Recommended

First round in the running battle over rights to transport explosives has gone to truckers. Latest skirmish was over applications for such operating authority by a number of highway carriers. Railroads and others objected strongly, loudly. But the ICC examiner, after extended hearings, recommended varied authority to Riss & Company and several others. Main importance lies in the findings that the past record of motor carriers is "satisfactory," that transport of ammunition and explosives by "qualified" motor carriers is no more dangerous than by railroads. Final approval of the recommended authority by the full ICC would, in effect, also endorse these opinions.

## Leasing Regs . . . Effective Sept. 1

Interstate Commerce Commission's common and contract motor carrier leasing regulations will be effective Sept. 1, it was ordered last month. The order also includes changes and modifications to the original regulations. Meanwhile, legislation setting aside the ICC's power to regulate leasing is still pending in Congress. Agriculture, formerly almost solidly behind the measure, may be appeased by the modifications. Private carriers, also strong backers at one time, are concerned about proposed amendments to the bill. Senate won't take up the measure until after the House acts, thus may not get to it before adjournment. Capitol sources give the bill a 50-50 chance of enactment this session.

## BPR . . . Not Much Change

Despite talk, there won't be much change in Bureau of Public Roads policy or operations. Commerce Secretary Weeks says definitely that the Bureau is not to be watered down, that it will carry out whatever highway policies and programs are "placed before it by Congress and the president." But it will be streamlined after a management study. Mr. Weeks did not apply the 15 per cent cut to the \$540 million federal aid item.

## Military Traffic . . . New Top Job

Starting what looks to be a general reshuffling of the Defense Department's transportation functions, Secretary Wilson has created position of director of transportation. This is to be filled by Kenneth L. Vore who has been head of the Military Traffic Service since early 1951. Vore's big job will be to keep the Secretary and staff advised on department traffic mat-

ters, to establish and review policies and programs along this line. Major General Frank A. Heilman, recently retired as Army Chief of Transportation, was named as consultant to Vore and Colonel Charles H. Voeller was made executive assistant.

## Sizes and Weights . . . duPont Wants Facts

Public Roads Commissioner du Pont is on record as favoring adoption of standardized sizes and weights for commercial vehicles throughout the country. But so far he has steered clear of coming out in favor of any specific standards, says there is a "paucity of determined fact" on which to do so, wants more facts. He feels the Maryland road test was far from conclusive or constructive, pins hope on better, broader tests to be made this year in Idaho, Illinois.

## Automatic Rate Increases . . . Still Stymied

Enactment by Congress of the so-called automatic rate increase legislation is still a long way off despite railroad pressure. This bill (S-1461) would make it mandatory for ICC to put requested rail rate increases into effect within 60 days. If eventually turned down by ICC or granted a rate less than asked, railroads would refund any overcharge. Last month, bill was still in Senate committee hands. House may not get around to it this session.

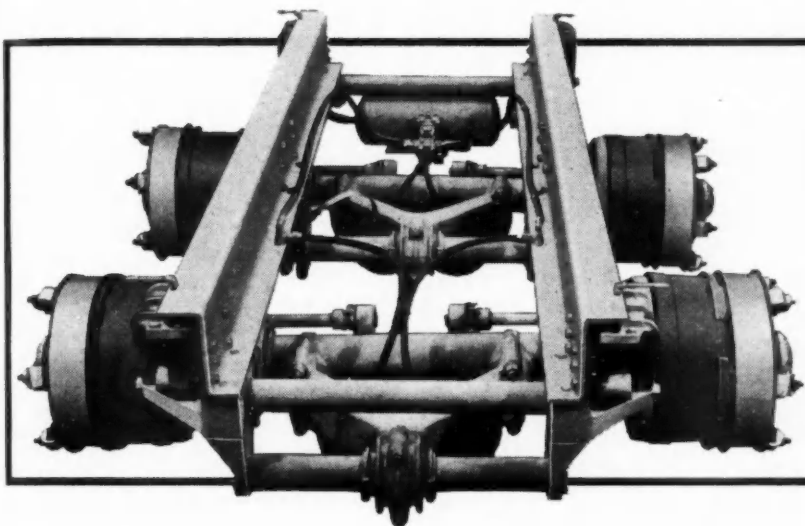
## ICC Funds . . . Senate Debating

Senate Interstate Commerce committee last month was debating whether to try to restore funds for safety and field operations of the Bureau of Motor Carriers. The \$1.8 million asked for BMC was lopped off by the House from \$11.2 million voted for all ICC work next year. This is \$1 million less than asked but \$150,000 more than voted last year. House Interstate committee said it saw no reason for giving ICC more funds until it is reorganized.

## RR Free Pickup . . . ICC Suggests 10¢ per cwt

Proposals for dropping presently free pickup and delivery service of eastern railroads have been turned down by ICC. Commission said proposed 10-to-37 cents per cwt were too high, would give freight forwarders, truckers too much "competitive advantage." Commission suggested it would be better to make a flat charge of 10 cents per cwt for such service, regardless of distance, that uniform rates are important for such service and should be established.

# Why the Major Oil Companies specify *Trucktor* Trailer Axles



**Reliability  
Safety  
Low Maintenance**

**MAINTAIN ALIGNMENT**—*Trucktor* Trailer Axles are towed by rubber-mounted yokes . . . thus are able to move in a radius around the rubber pivot point at the yoke head. This prevents tire scuffing.

**NO AXLE HOPPING—ABSOLUTE SAFETY**—Rubber-mounted Spring Seats relieve springs of all brake reaction. The rubber surrounds the axle under tension. Thus the springs can rock around the axle, while the yoke stays solid with the axle taking all brake reaction. Many claim "no axle hopping," but *Trucktor* guarantees it on emergency brake application—with vehicle loaded or unloaded. Think what this means in safety, positive braking, and good tire wear.

**LOW MAINTENANCE**—Rubber mountings eliminate axle breakage and leaks or cargo damage from road shock. Maintenance records show *less than a mil a mile* (\$.001) to keep assembly in good-as-new condition.

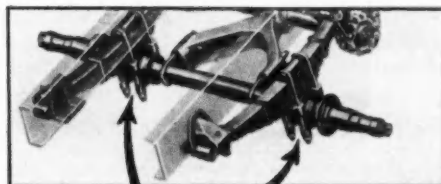
**HIGH FLEXIBILITY**—*Trucktor* Tandems provide through Chain-and-Sprocket Load Divider twice as much up and down axle movement as other trailer suspensions. This prevents overloading axles when trailers are on short, sharp ramps.

**EVEN LOAD DISTRIBUTION**—*Trucktor* Tandems have three points of support on each frame rail, and two springs for each axle. This type of construction eliminates concentrated loads—protecting frame, tank and cargo from shock loads and breakage.

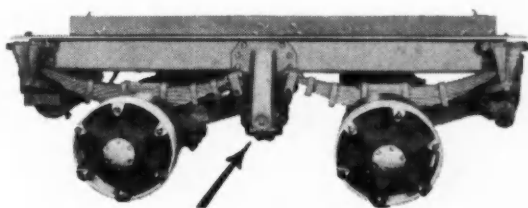
**REDUCED WEIGHT**—*Trucktor*, by slight variations in the design of its tandem suspension, has reduced the weight of its 1953 production tandem.



Tanks ride more smoothly



Rubber-mounted Spring Seats



Chain-and-Sprocket Load Divider

***Trucktor* TRAILER  
AXLES**

TRUCKTOR Tandem Suspensions are also engineered for use with the new GENERAL TIRE AND RUBBER COMPANY AIR SPRINGS.

TRUCKTOR also manufactures single axle suspensions.

THE TRUCKTOR CORPORATION, Route 22, Mountainside, N. J.  
**Safety IS NO ACCIDENT—6-Wheelers ARE SAFER!**



# DETROIT DISPATCH

by LEN WESTRATE Detroit News Editor

## Trucks . . . Production Up, Sales Competitive

There no longer is any doubt that 1953 is going to be one of the biggest competitive years in truck sales since the end of the war. Production is up 10 per cent from a year ago and, while sales are also up, field stocks are getting sticky already in some categories. Other companies have not yet indicated any intention to follow Dodge and International in price cuts but there is plenty of action at the dealer level and what the manufacturers will do at their end probably will be determined by just how rugged the market gets a little later on. Current prospects point to between 1.2 and 1.3 million production this year.

## Trucking . . . Supports Uniform Safety Regs

While truck manufacturers have had aggressive differences of opinion with ICC in the past they now are rallying to its support. The industry was active in advocating reinstatement of funds for the safety section which had been cut off by House action but later reinstated by the Senate. The feeling is that the agency generally does a good job in providing uniform safety regulations which might otherwise fall into the hands of separate states, resulting in confusion for both manufacturers and operators if they had to conform to several different state codes.

## Trailers . . . Two on a Flat Car

We hear that a large industrial concern is considering development work on a 70 ft freight car designed to carry two 35 ft truck trailers. Objective would be a mutual benefit deal for railroads and certain truck operators in hauls particularly adapted to such an arrangement, such as where trailers return empty or in bad weather areas where over-the-road operations are difficult. It is understood that a very favorable rate could be established with such a setup. It probably would involve special loading facilities or a separate terminal arrangement. It also is envisioned that the trucker would have dock-to-dock control of the shipment.

## Tilt Cabs . . . Subject of Patent Suit

The truck industry is watching with interest outcome of the suit brought by White against Diamond T, charging infringement of patents covering tilt-cabs. Five patents are said to be involved in the litigation. Since Diamond T uses a spring-loaded, manual lift tilt device in contrast to a power lift on White cabs,

the industry is wondering whether the issue will center on White's exclusive rights to a forward tilting cab actuated by any kind of assist.

## Sunday Truck Bans . . . May be Increasing

Apparently there is a trend toward more legislation banning use of trucks on the highways on Sundays and, in some cases, holidays. Two states, Missouri and Washington, have killed such measures but four others, California, Michigan, Ohio and Pennsylvania, have them under consideration. Wisconsin currently restricts all but essential truck use on Sundays and holidays through action of the Public Service Commission. Massachusetts regulates Sunday truck use under a law banning Sunday work.

## Engines . . . Replace or Overhaul?

Replacement of worn engines with a new unit instead of time-consuming overhauls appears to be on the increase among truck operators. White says its truck engine replacement sales business is up 20 per cent over a year ago on complete engines, 38 per cent ahead on short blocks. The company has developed specifications for adapting its engines to all major makes of trucks. Big selling point is that quick-change techniques keep truck out of service only a few hours.

## Mud Flaps . . . Problems Under Study

A special AMA committee is studying the problem of mud flaps on trucks. Several states have passed, or are considering, bills requiring splash guards and there is concern about some of the requirements specified. One big objection is that mounting as specified in some cases is impossible because of spring interference. Another objection is that the flaps divert the spray to the sides rather than to the back and do not really solve the problem.

## White-Autocar . . . Merger Still Pending

At last reports negotiations still were in progress toward a merger of White and Autocar. Hurdles still to get over include approval of government agencies, such as RFC, which has a loan interest in Autocar, and an O.K. from the Justice Department. Acquisition would give White a sizeable body of Autocar owners in the large truck field which would expand service business. It is understood that Autocar would be operated pretty much as it is initially, with integration possible at a later date.

the extra  
**BRAKING  
ECONOMY**  
proven  
here...



High in the Rockies Crossing the Continental Divide.



*Cost Cutting Bendix-Westinghouse Air Brakes Reduce  
Downtime and Repairs on Rugged Mountain Runs!*

When a braking system proves itself for **safe, dependable performance and low operating costs** day after day over one of the toughest trucking routes in the country its got to be good! And that's exactly what Bendix-Westinghouse Air Brakes do on hundreds of trucks operating over Colorado's Berthoud Pass which cuts through the rugged Rocky Mountains at altitudes exceeding 11,000 feet. Here these **mighty brakes** are put to a grueling test—mile after mile of steep downgrades and sharp, tight curves that require almost constant braking application. Yet here, actual fleet records testify year after year that Bendix-Westinghouse Air Brakes pay off not only with **peak performance, positive control and utmost reliability**, but with actual hard cash savings on maintenance, parts replacement costs and reduced downtime. That's why, no matter what type trucks you operate and whether you operate them across town or cross country, you'll be way ahead in both performance and profits with the **brakes proven for economy**—Bendix-Westinghouse, the world's most tried and trusted air brakes!

...means  
**MORE  
PROFITS**  
on any  
hauling job

**Bendix-Westinghouse**



THE WORLD'S MOST TRIED AND TRUSTED

**AIR BRAKES**

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • ELYRIA, OHIO • BERKELEY, CALIF.



## JUNE ROUNDUP

by **ERNIE FOREST** Assistant Editor

### ATA Spring Meetings . . . Highlights

Biggest gathering of fleetmen last month was the triple-council meeting of American Trucking Assns. at Dallas, Texas. There, Ward L. Bennett, Baltimore Transfer Co., was elected chairman of the Equipment and Maintenance Council for the coming year; James O. Toler, Southern Express, Inc., to head the Terminal Operations Council; and Roy M. Wilkins, Super Service Motor Freight, to chairman the Council of Safety Supervisors.

While complete details of the meeting were not available at press time, it can be pointed out that highlights included:

An engineering outlook at the future by Frank R. Nail, assistant to chief engineer, Mack Mfg. Co., with special emphasis on the trend to light-weight compact designs, especially for highway tractors. He said we can expect 150 hp gasoline tractors weighing 8000 lb and 170 hp diesel tractors weighing 10,000 lb.

A talk before the Safety Council by ATA's G. D. Sontheimer, in which he cited a reduction in accidents involving trucks from 17 per cent in 1948 to 14 per cent in 1952, pointed out there would have been 648,000 more accidents had not the rate been reduced, blamed "highway hypnosis" on part of passenger car drivers for many truck accidents.

A panel at the Terminal Operations Council where emphasis was placed on the importance of good supervision and the efficiency of proper mechanized equipment.

In a familiar and punch-packed style, ATA Managing Director John W. Lawrence urged all Councils to work together sharing a mutual working exchange of ideas.

### Motor Carriers . . . Dividing?

As if pinpointing Lawrence's admonition, though in an admitted unrelated field, three developments were noted in what appears to be a growing split between different types of motor carriers that can give "aid and comfort" to the railway's "divide and conquer" tactics. (For previous reports, see News Roundup in Feb., Mar., and April.)

Speaking in Philadelphia, Senator Bricker of Ohio said federal regulation has placed motor common carriers under a disadvantage in competing with less closely regulated competitors, recommended water and motor contract carriers be required to disclose actual rates and agricultural exemption be limited to transport from farm to primary market.

California Motor Transport Assns. issued two book-

lets comparing for-hire and private intercity truck taxes as levied in that state and concluded that, unless something were done about the heavier for-hire taxation, the number of private carriers would increase, for-hire carriers would be in danger of losing their business, the state would lose highway revenue and small shippers would have a transportation cost disadvantage.

And a Bureau of Public Roads study of highway revenues paid by contract, private and farm trucks found (1) distinctly different tax rates in effect in most states for the three classes and (2) while the private carrier's truck imposes the same highway burden as the same size contract carrier's truck, the private carrier's truck does not pay as much per mile in taxes in most states.

The BPR study also found that "only 2 per cent of our vehicles are trucks of 40,000 lb or more capacity," concluded that the bulk of needed highway revenue would have to come from passenger cars and lighter weight trucks.

### Materials Handling . . . Interested Fleetmen

Another meeting of interest to fleet operators last month was the National Materials Handling Exposition in Philadelphia. About 25,000 visitors toured the shows 340 exhibits, covered 170,000 sq ft in doing so. A few of the many items of interest to fleetmen in their materials and freight handling problems are included in a special roundup on the show starting on page 86 in this issue.

### Railroads . . . Still At It

Although Pennsylvania Motor Truck Assn.'s damage suit against 31 eastern railroads and their public relations agency, Carl Byoir and Associates, remained in pre-trial deposition stage this past month, the effects were felt as far west as California.

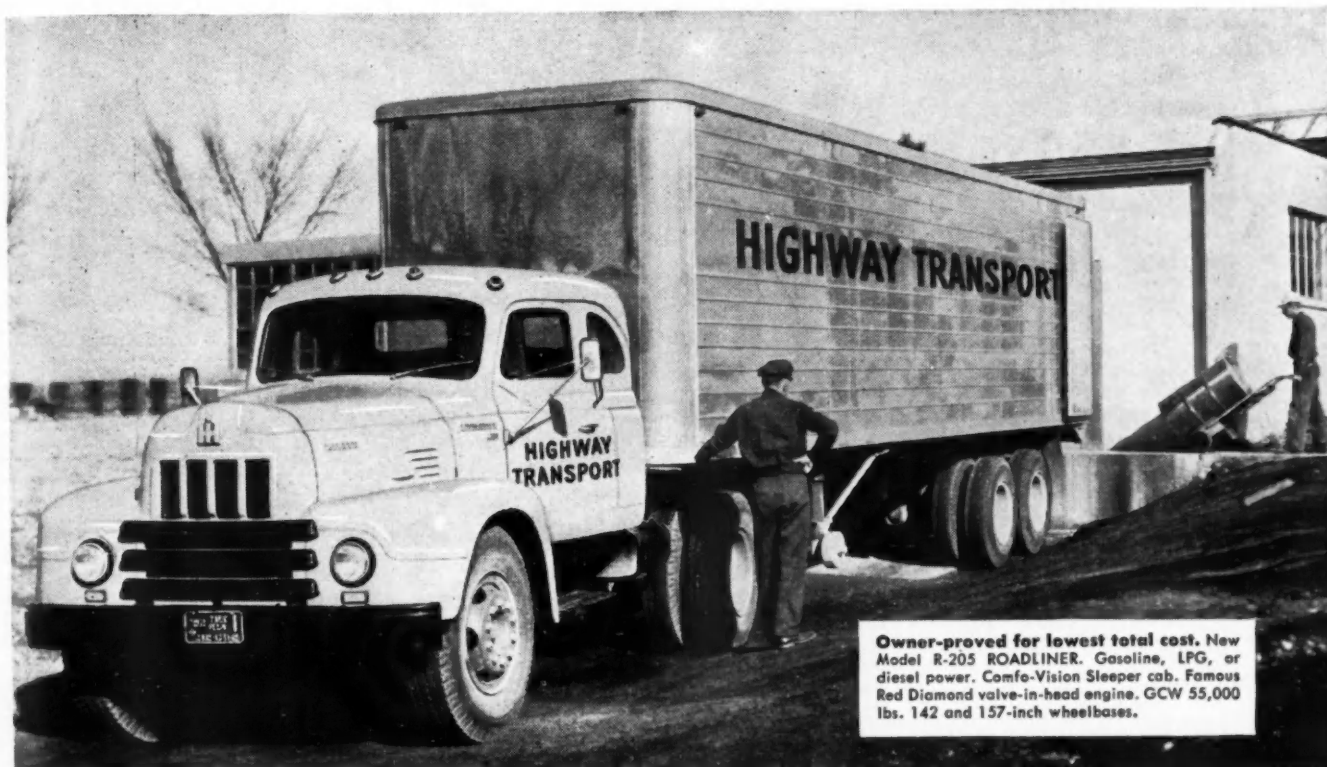
Out there, ATA President Walter Carey, told Western Highway Institute members about a highway propaganda film, "Highways and Byways, USA," made with railway money but distributed as coming from the Farm Roads Foundation. In Washington, in PMTA suit depositions, a Farm Roads Foundation official admitted that the Assn. of Western Railways had borne the entire cost of distributing the film. Earlier, it had been testified that the Eastern Railroads Presidents Conference and the Southern Railroad Assn. had contributed \$60,000 each to the Western Railways Assn. for the film.

(TURN TO PAGE 203, PLEASE)



# TAKE THE GUESSWORK

## out of your truck buying



Owner-proved for lowest total cost. New Model R-205 ROADLINER. Gasoline, LPG, or diesel power. Comfo-Vision Sleeper cab. Famous Red Diamond valve-in-head engine. GCW 55,000 lbs. 142 and 157-inch wheelbases.

### New Internationals are proved all 3 ways

You take the guesswork out of truck buying when you buy International trucks. They are proved all 3 ways to give the performance you want at *lowest* cost:

1. **Proved BEFORE They're Built**—at the world's most advanced all-truck engineering laboratory. The results—longer truck life, reduced operating and maintenance cost—give you more truck for your dollar.
2. **Proved AFTER They're Built**—at the "Desert Whipping Post," 4000-acre Proving Ground in Arizona.
3. **Proved in SERVICE**—by America's most cost-conscious truck operators. Every new International

truck embodies the advanced engineering principles that have kept Internationals the heavy-duty sales leader for 21 straight years.

See them. Compare them. Drive them. Ask your nearest International Dealer or Branch for all the facts.

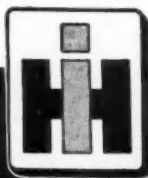
#### America's Most Complete Truck Line

168 basic models from ½-ton to 90,000 lbs. GVW rating . . . 307 new features in the new R-line . . . 29 engines available with widest practical choice of gasoline, LPG or diesel power . . . 296 wheelbases.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

International Harvester Builds McCormick Farm Equipment and Farmall Tractors . . . Motor Trucks . . . Industrial Power . . . Refrigerators and Freezers

Better roads mean a better America



# INTERNATIONAL TRUCKS

"Standard of the Highway"

# The Pennsylvania Plan for COOPERATIVE SAFETY PATROL



The plan is not confined to Pennsylvania. During the first three months of this year, patrol members coming

from 10 states made observation reports in 13 states and Ontario on trucks and buses domiciled in 28 states

Robert Varner, PMTA Accident Prevention Conference Charman and Coastal Tank Lines Safety Director, drives an unmarked car as do about half the members



O. D. Shipley, PMTA Safety Director, administers plan, makes reports also



... is a volunteer organization coordinated by Pennsylvania Motor Truck Assn. to observe trucks on the road, keep management informed

**PENNSYLVANIA MOTOR TRUCK ASSOCIATION**  
 TELEGRAPH BUILDING  
 HARRISBURG, PENNA.  
**COOPERATIVE SAFETY PATROL - OBSERVATION REPORT**

Date \_\_\_\_\_ Time \_\_\_\_\_ AM Observer's PW Card No. \_\_\_\_\_

Name of vehicle owner \_\_\_\_\_ Address \_\_\_\_\_

COMPANY NUMBERS \_\_\_\_\_ LICENSE NUMBERS \_\_\_\_\_

Truck \_\_\_\_\_ State \_\_\_\_\_  
 Tractor \_\_\_\_\_ State \_\_\_\_\_  
 Trailer \_\_\_\_\_ State \_\_\_\_\_

Location St. No. \_\_\_\_\_ Mile \_\_\_\_\_  
 Travel Direction \_\_\_\_\_ Toward \_\_\_\_\_  
 Type Road \_\_\_\_\_

Another & Road Conditions \_\_\_\_\_ Notes Observed \_\_\_\_\_

VIOLATIONS \_\_\_\_\_

Too Fast for Conditions \_\_\_\_\_  
 Followed Too Close \_\_\_\_\_  
 Unsafe Passing \_\_\_\_\_  
 Failed to Permit Passing \_\_\_\_\_  
 Failed to Keep Right \_\_\_\_\_  
 My Speedometer was Calibrated on (DATE) \_\_\_\_\_

Remarks \_\_\_\_\_

**REPLY ENVELOPE**  
 Pennsylvania Motor Truck Association  
 Seventh Floor, Telegraph Building  
 HARRISBURG, PA.

Please Confidential Report is submitted for your information in the interest of Traffic Accident Prevention  
 "Safety is no Accident"

Patrol members fill out this report form in triplicate, keep one copy and mail others to PMTA, which keeps a copy and sends original to truck's owner

Paul Killingsworth, Eastern Motor Express Safety Engineer, has mobile telephone and short wave radio like many in the patrol plan's Turnpike section



DURING the first quarter of this year there were 20 fatal accidents on the Pennsylvania Turnpike. But only one of those was caused by a truck, despite the fact that commercial vehicles accounted for 25 per cent of the traffic.

Compare this to 1952 when trucks made up 17.6 per cent of the traffic and were the cause of 15 per cent of the fatal accidents.

Such an outstanding record of accident reduction—on the Turnpike as well as on other Pennsylvania highways—is due, at least in part, to the reactivated and revitalized cooperative safety patrol sponsored and coordinated by the Pennsylvania Motor Truck Assn., who originally started the plan about five years ago.

As this issue went to press, word was received of another patrol activity. Starting May 25, it will make a 24 hr a day survey of Memorial Day weekend traffic within a 35 miles radius of Harrisburg. Purpose is to determine the best truck handling for summer weekends, minimize traffic problems, make more room for the motoring public. Fifty patrol members and local enforcement officials will participate using the latest scientific road check equipment including radar for speed measuring. Similar studies are planned for Pittsburgh, Philadelphia, York and Lancaster.

Truck and bus operators, large and small, private and for-hire, have been quick to see the value of the program. A small, private carrier, E. R. Beers Electric Co., Bloomsburg, Pa., wrote, "We think this is a fine idea and, that if used properly by truck operators, will be of great value in increasing the highway safety program and in promoting more good will among the motoring public for our truck operators."

Akers Motor Lines, Inc., Gastonia, N. C., commented, "This kind of information is very valuable in our safety program and is very much appreciated." And Associated Transport, Inc., New York City, concluded a letter with, "We are grateful to the Association for making these reports available to us and assure you of our cooperation."

A big Turnpike user, Pennsylvania Greyhound Lines, Cleveland, Ohio, wrote, "Each report receives prompt attention with the view of correcting any unsafe driving practices that may exist."

National Container Corp., Jackson-  
 (TURN TO PAGE 114, PLEASE)



## METHOD

1. Visual Inspection ("That truck is a junker")
2. Money Available ("We have \$50,000 to spend")
3. Replace every "X" miles or "Y" years
4. Replace when vehicle is fully depreciated
5. Replace when maintenance exceeds depreciation
6. Replace when annual cost is lowest
7. Replace when "worn out beyond repair"
8. Replace to obtain modern appearance
9. Replace when major repair becomes necessary
10. CAPITAL EARNINGS PLAN

## ADVANTAGES

1. Simple. Requires no records
2. Simple. Requires no fleet cost records
3. Simple. Illusion of objective control
4. Simple illusion of control. Conforms to accounting
5. Relatively simple. Based on analysis of a sort
6. Appears simple. Appears to minimize cost
7. Sounds hard-headed. Avoids analysis
8. Provides attractive fleet, better advertising billboards
9. Avoids major repair expenditures, lessens investment
10. Is most scientific. Relates costs to capital investments

## Capital Earnings as a Guide to VEHICLE REPLACEMENT

THE SUBJECT of when to replace motor vehicles may not be the most important problem of the fleet operator, but it is certainly one of the most controversial. Outlined in the table above are ten different methods of solving the problem. All of them are widely used. All of them, including the capital earnings plan, have definite advantages and disadvantages, as indicated briefly in the chart.

This is a discussion of the capital earnings plan which my associates and I have come to believe is the most scientific and most acceptable, particularly from the standpoint of top management. It is especially applicable to the transportation managers of private fleets who must compete for funds with the managers of other departments. Admittedly it is complex and requires considerable training and skill. But it is now in successful operation by a number of fleets.

The plan is based on the dual premise that (1) money used for new vehicle purchases is a capital expenditure rather than an expense item, and (2) that the expected operating cost

of the new truck must produce sufficient *savings* over the expected operating cost of the old truck to justify the additional capital expenditure involved.

Our problem here is to justify both of these premises and to explain as briefly as possible the methods used in computing the expected costs, and resultant savings.

### Capital Expenditure

SOME will argue that the initial and operating cost of motor vehicles are merely expense items on the basis that the vehicles are tools of the business and as such are expendable. This same reasoning, however, could be applied to virtually every capital asset of the company. What distinguishes a capital expenditure from operating expense is not its essentialness to the business but the length of time over

which the outlay of funds produces benefits.

From this viewpoint, motor vehicles are clearly capital expenditures. As such, the motor vehicle department must compete with other departments for the company's capital funds which are nearly always limited. If the transportation superintendent can show that funds invested for new vehicles will produce greater earnings for the company (in the form of savings) than funds invested in other departments, he will have a powerful and effective argument in his favor. Conversely if he is unable to justify

\* The accompanying article is based on a paper presented by Dr. Dean at the annual meeting of the American Gas Assn. in Chicago. It has been greatly condensed and simplified from the original version in order to present only the salient highlights of his intriguing plan for determining economic vehicle replacements. Copies of the complete paper are available from the American Gas Assn., 420 Lexington Avenue, New York 17, N. Y., at a cost of 25 cents each. The economic advisory services of Joel Dean Associates, Yonkers, N. Y. are also available to fleet operators. The Editors.

## DISADVANTAGES

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4. Not rela
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7. Truck ne
8. Underest
9. Does no
10. Requires

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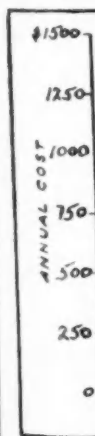
## replace

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Fig. 1. Annual cost of vehicle replacement



## DISADVANTAGES

1. Has no sound basis of fact other than simplicity
2. Has no sound basis of fact other than simplicity
3. Truck costs not based solely on age or mileage. Gives no weight to comparative costs
4. Not related to real cost of operation. Does not compare future costs
5. Ignores difference in other cost elements. Fails to consider future return on investment
6. No point on lifetime cost curve is significant by itself. Does not compare future costs
7. Truck never "worn out beyond repair." Ignores comparative costs
8. Underestimates effectiveness of body overhaul. Ignores productivity
9. Does not compare future costs. Does not compute rate of return
10. Requires training, research and analysis. Estimates are subject to error

**Economist argues that trucks are capital expenditures rather than expense items; replacement should be based on earnings**

expected savings in relation to other capital expenditures, he may do well to postpone his replacement program.

### How Much Can Be Saved?

THUS the problem resolves itself into one of determining how much money can be saved by the purchase of new motor vehicles. To do this it is necessary to plot the anticipated

cost of operating present vehicles for another year and compare these figures with the anticipated average lifetime cost of comparable new vehicles.

The graphs in Figs. 1 and 2, contain the key to successful operation of the plan, but they obviously require considerable explanation.

Figure 1 shows cost curves in terms of annual cost for a hypothetical

\$2,500 truck. The curves are theoretical and are designed solely to illustrate the method. They do not portray actual cost of a specific truck.

The capital wastage curve represents the expected decline in market value of the truck each year, based on the expected decline in disposal value. Thus, if disposal value at the end of the first year is \$1,600, market price depreciation for that year is \$900. This curve declines sharply at first and then falls off more and more gradually as the truck gets older. The curve shows the market-price depreciation, based on the expected decline in disposal value during each year.

The maintenance cost curve represents the increase in annual maintenance and repair expenditures that will occur over most of the truck's life.

(TURN TO PAGE 124, PLEASE)

Fig. 1. A method of plotting specific and combined annual costs for a hypothetical \$2500 truck. Capital wastage curve indicates decline in actual market value

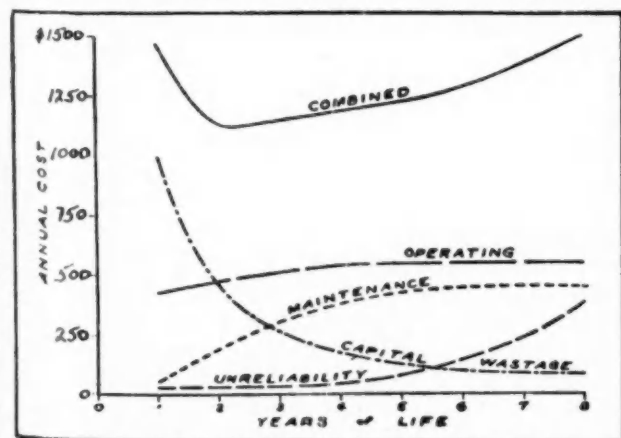
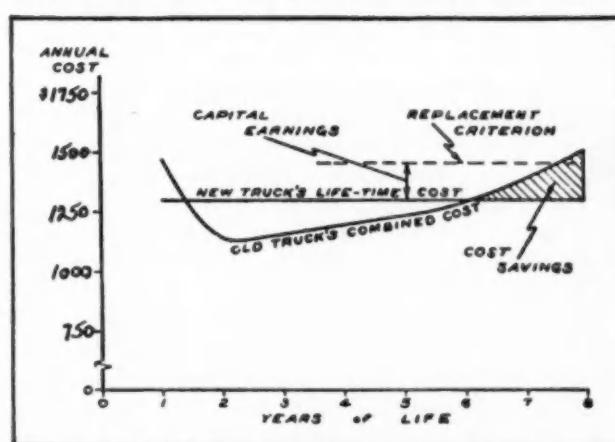


Fig. 2. Expected cost of old truck is now plotted against average life-time cost of new vehicle. Cost savings in shaded area are key to replacement plan



| COMMISSION DE TRANSPORT DE MONTRÉAL<br>CLASSIFICATION DES ACCIDENTS RAPPORTÉS |       |  |       |
|---|-------|--|-------|
| DATE  | HEURE | ROUTES   | TOTAL |
| GÉNÉRAL D'ACCIDENTS   |       |  |       |
| ACCIDENTS DE LA CIRCULATION-TOTAL   | CODE  |  |       |
| COLLISION AVEC VÉHICULES APPARTENANT  | 1     | TRAFFIC ACCIDENTS                                      |       |
| Véhicule en mouvement   | 11    | COLLISION WITH MOTOR VEHICLE                           |       |
| Flippé en arrière   | 111   | Vehicle in front                                       |       |
| Véhicule heurté par un camion   | 112   | Head end   |       |
| Véhicule heurté à gauche  | 113   | Vehicle hit in ahead                                   |       |
| À la sortie du carroussel   | 114   | Vehicle turning left                                   |       |
| Véhicule heurté par un véhicule de la C.T.M.                                  | 115   | To or from parking                                     |       |
| Véhicule heurté à droite  | 116   | Vehicle backed into N.T.C. vehicle                     |       |
|   | 117   | Vehicle turning right                                  |       |
| Véhicule stationnaire   | 12    | Vehicle following                                      |       |
| Véhicule heurté par un camion   | 121   | Vehicle run into rear                                  |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 122   | N.T.C. vehicle backed into vehicle                     |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 123   | N.T.C. turning right                                   |       |
| Véhicule heurté par un camion   | 13    | Vehicle overtaking and passing                         |       |
| Véhicule heurté par un camion   | 131   | Vehicle hit in front                                   |       |
| Véhicule heurté par un camion   | 132   | Vehicle hit in alongside                               |       |
| Véhicule de la C.T.M. heurté à l'arrêt  | 133   | Vehicle stopped by overtaking                          |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 134   | N.T.C. vehicle pulling into stop                       |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 135   | N.T.C. vehicle pulling away from stop                  |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 136   | N.T.C. vehicle turning right                           |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 137   | N.T.C. vehicle turning left                            |       |
| Véhicule heurté par un camion   | 138   | Vehicle struck or hit stopped by                       |       |
| Véhicule heurté par un camion   | 139   | N.T.C. vehicle's door                                  |       |
| Véhicule heurté par un camion   | 14    | Vehicle being overtaken and passed                     |       |
| Véhicule heurté par un camion   | 141   | Vehicle run into front of N.T.C. vehicle               |       |
| Véhicule heurté par un camion   | 142   | Vehicle sprang into side of N.T.C. vehicle             |       |
| Véhicule heurté par un camion   | 143   | Vehicle struck by overtaking                           |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 144   | N.T.C. vehicle scraped a standing vehicle              |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 145   | N.T.C. vehicle scraped a moving vehicle                |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 146   | N.T.C. vehicle turning right                           |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 147   | N.T.C. vehicle turning left                            |       |
| Véhicule heurté par un camion   | 148   | Vehicle struck or hit stopped by N.T.C. vehicle's door |       |
| Véhicule heurté par un camion   | 15    | Vehicle approaching from behind                        |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 151   | N.T.C. vehicle going straight - vehicle from the left  |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 152   | N.T.C. vehicle going straight - vehicle from the right |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 153   | N.T.C. vehicle turning right - vehicle from the left   |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 154   | N.T.C. vehicle turning right - vehicle from the right  |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 155   | N.T.C. vehicle turning left - vehicle from the left    |       |
| Véhicule de la C.T.M. heurté par un camion                                    | 156   | N.T.C. vehicle turning left - vehicle from the right   |       |

To obtain necessary data for effective correction of accident causes, Montreal uses this very detailed form. English translation of French has been typed in



Winning division in annual competition is awarded President's trophy

# SELECTIVE CONCENTRATION Cuts Accident Rate by 20%



Howard Baker  
MTC Director of Safety

Detailed analysis of hazardous intersections, accident causes and accident-prone

WITH limited funds—and whose funds *aren't* limited?—there's only a certain amount any safety program can hope to accomplish. So why not admit that and go to work on the trouble spots? Such is the unadorned but practical philosophy of Howard Baker, safety director of the Montreal Transportation Commission, one of the larger transit properties on this continent.

Baker calls the program "selective concentration" and offers the following data to prove it works. In 1952, as compared with 1951, Montreal Transportation's accident rate

By Michael M. Gutwillig

dropped 2.16 per cent despite a 3.4 per cent increase in mileage during the year.

But these are not the most dramatic results. When the data for the last six months of 1952 was compared to the first six months, further improvement was evident. Number of accidents dropped 2.5 per cent and the accident rate was down 5.6 per cent although there was a 3.3 per cent increase in mileage.

And the improvement is continuing. For the first three months of this year, as compared to last year, the accident rate has dropped 20.6 per cent and the number of accidents is down 18.1 per cent, despite a 3.2 per cent increase in mileage.

## Zero In on Trouble Spots

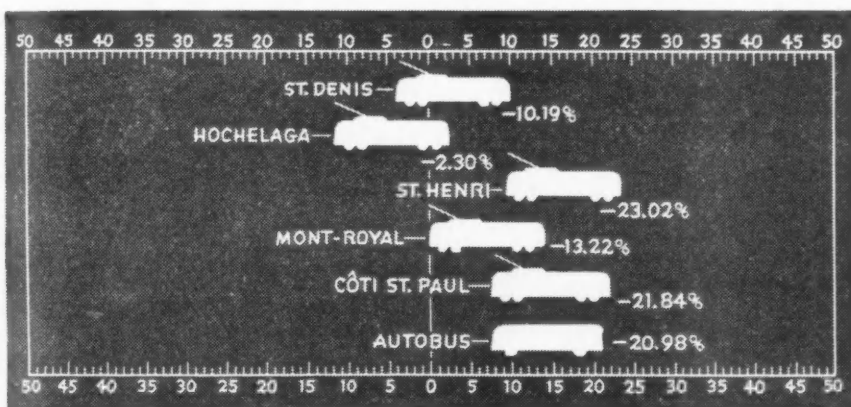
BAKER'S success comes from zeroing in on his "trouble spots" from several angles. From his all-embracing accident summaries, he's able to pinpoint and isolate (1) the most hazardous intersections and locales, (2) the nature of the most recurring





Safety flag goes to top division each month. Losers have sign on their flag holder saying, "Why isn't the Safety Flag flying here?"

These posters mounted on divisional bulletin boards keep drivers informed on how their division compares with standing of others.



## prone employees pays off for Montreal Transit

accidents and (3) the most accident-prone employees. Only after MTC has trained its spotlight on each of these trouble areas are remedial measures taken.

On Howard Baker's desk sits a large loose-leaf manual containing a complete collection of accurate diagrams of the most hazardous intersections. On the first page of the book is a master list of these trouble spots, listed in descending order of accident incidence. (The list is revised each year, easily reflects measure of success from corrective treatment.)

After MTC experts have studied

these intersections, the following steps are taken: First, recommendations are made to correct the basic physical cause, something that can usually be achieved through liaison with municipal authorities. And, second, an information program is targeted at advising drivers that extra caution must be exercised at these particular points.

A copy of every accident report reaches the Safety Department for analysis. From these reports, a daily resume and monthly summary is compiled for every route operated by the Commission. And the noteworthy

point, according to Baker, is that MTC was not content with the limited classification breakdown of most standard safety forms. On the MTC summary, for instance, a category such as COLLISION WITH MOTOR VEHICLE will have among its sub-headings an item listed "Vehicle Being Met and Passed" which, in turn, will be treated to this finer inspection:

Head-on collision.

Vehicle cut in along left side of MTC vehicle.

Vehicle scraped by MTC vehicle going straight ahead.

Vehicle turned into path of MTC vehicle.

MTC vehicle turned into path of vehicle.

Vehicle struck by overhang of turning MTC vehicle.

Vehicle scraped by MTC vehicle turning left.

Such scrupulous analysis of accidents soon provides the means for ferreting out a solution. A case in point was a recent difficulty MTC was experiencing with rear autobus automatic doors. Baker's composite lists pointed up the fact that a number of bus passengers were being caught or struck by automatic exit doors. Clothing was frequently caught in the doors and several times passengers were dragged along while the vehicles were in motion.

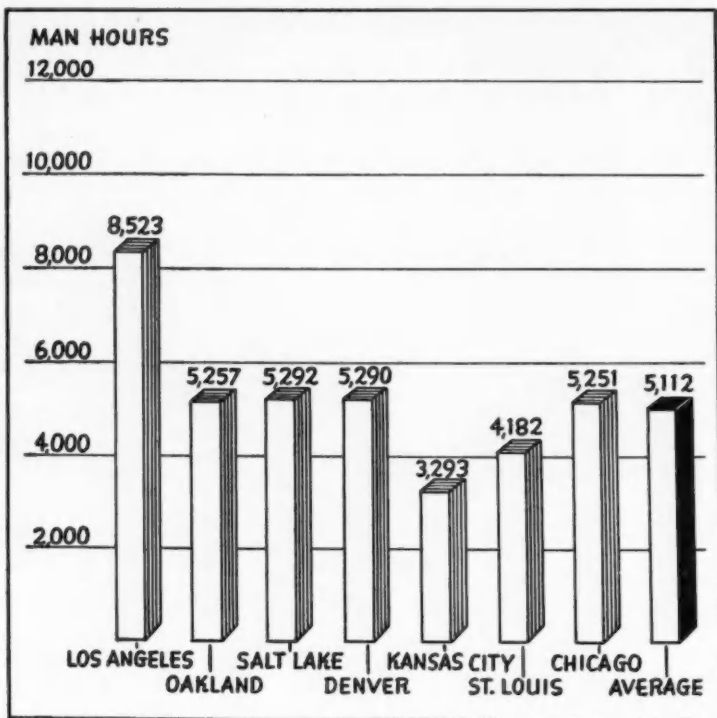
A little detective work on the study of passenger habits while alighting soon suggested a solution. A slight door modification sliced exit-door accidents to the tune of 81 per cent.

### The Accident-Prone Driver

SPOTLIGHTING the accident-prone driver is the third phase of Baker's "selective concentration" approach. The Personnel Department, under Bill Kierans, keeps a special record which lists each driver's accident involvements (whether or not he is to blame). Once a driver's card indicates high accident experience (the definition of "high" is derived from Personnel Department's comparing averages of 50 drivers with the same length of experience over the identical period), Personnel forwards a warning to the driver's superintendent.

When the superintendent receives this notice he must promptly interview the driver. The super dispenses advice and encouragement, submit-

(TURN TO PAGE 132, PLEASE)



In December, 1952, dockmen, pickup drivers, hostlers and shop employees averaged 5112 man-hours of work per occupational injury. Los Angeles was best, led the others with 8523 hours.



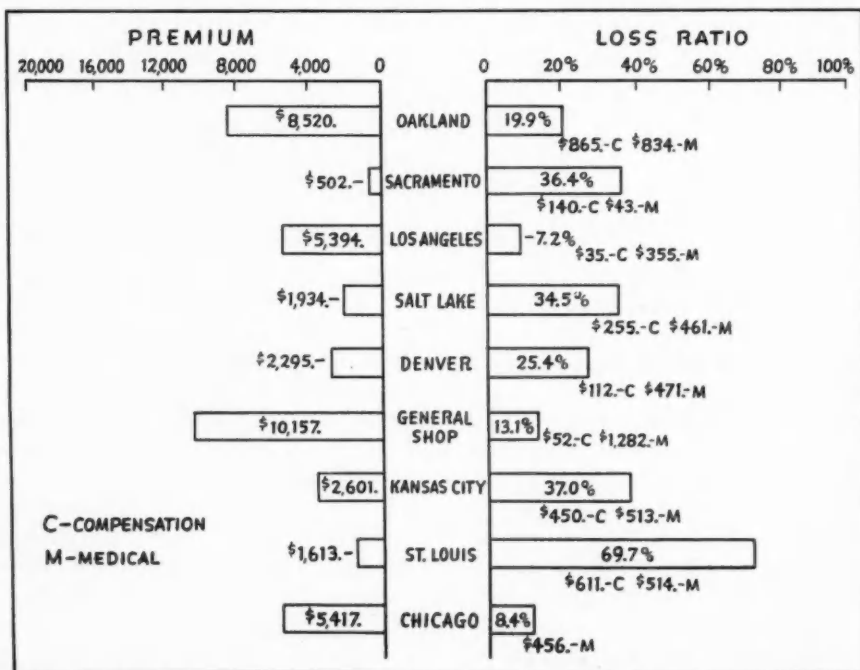
8-Ball trophy goes to spot with worst record. Here, Fleet Maintenance Director Jack Reising, right, passes it on to Service Foreman Jerry Sandlin at PIE's General Shops in Denver, Col.

This effective program started in

1949 w

## PIE Sliced Workmen's Co

Here is PIE's record of premiums paid and loss ratio for the first six months of 1952 as it was divided between the company's nine regional headquarters



A FEW months ago a check came to my desk. It read "Payable to Pacific Intermountain Express \$61,586.64." This is a preliminary dividend (approximately \$5000 more is due) received from our insurance carrier as a result of experience during 1951 on workmen's compensation. This is the money that occupational injuries did not cost us, and goes into our profit column. As known to most of those who are interested in this field, premium rates are established by a state rating bureau. After insurance company expenses are deducted, the balance is divided between the cost of injuries and the amount refunded. The estimated dividend for our 1952 experience is between \$85,000, and \$90,000.

If you think this came about by chance, or is merely a product of special financing, then you better not

spend to have le riers in those w operati boat by ing po pervisi activiti

If you are so yourself

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2. D compa the av your s

3. V ratio-

4. F (T



Continual reminder is a key point in the program. Each shop and dock has its own scoreboard like the one above



So far, 800 employees have had first aid training. It started with an instructor's course at PIE headquarters

1949 when the company's loss ratio hit 62 per cent. Here's how . . .



By K. N. Beadle,

Director of Safety, Pacific Intermountain Express Co., Oakland, Cal.

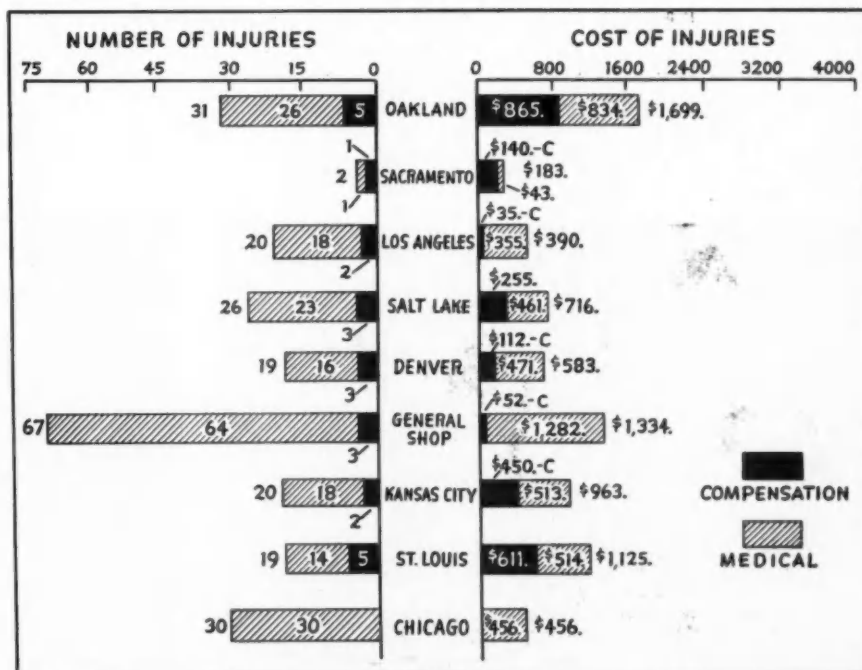
# Compensation Loss 47%

Companion chart to the one shown at the lower left, this one indicates the number of injuries and their cost. Both are supplied by the insurance company

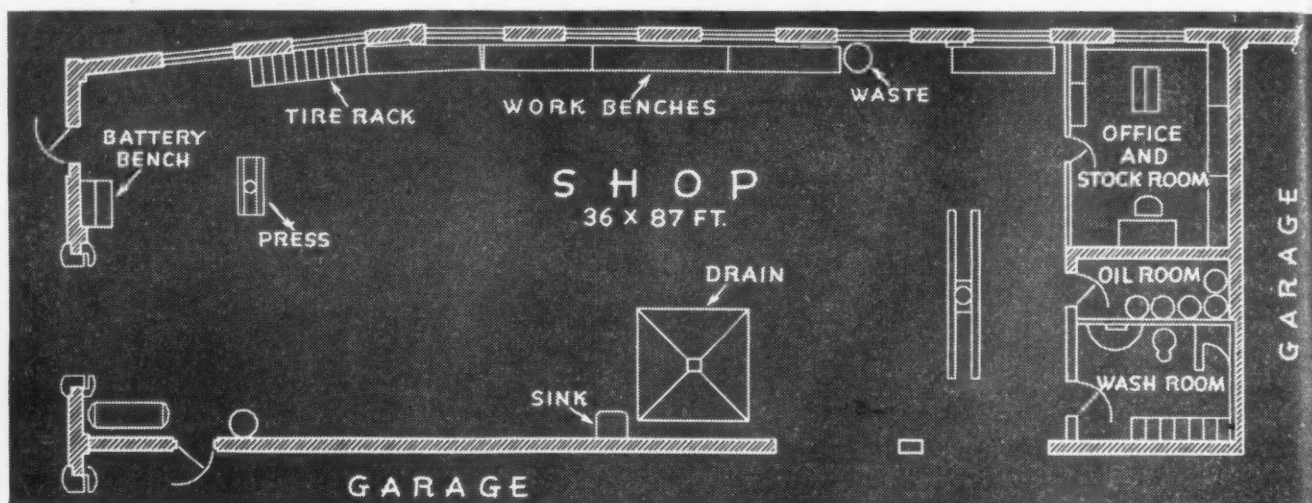
spend the time to read further. I have learned that those motor carriers interested in revenue, and even those whose primary concern is a low operating ratio figure, are missing the boat by disregarding the money-saving possibilities through proper supervision of workmen's compensation activities.

If you are in such a position, here are some questions you should ask yourself immediately:

1. Do you know exactly the amount of money workmen's compensation is costing you?
2. Do you know whether your company rate is lower or higher than the average rate for the industry in your state?
3. What is the trend of your loss ratio—up or down?
4. Have you examined your work—(TURN TO PAGE 166, PLEASE)







*Floor plan shows maximum use of space along walls, leaving center of floor clear. Trucks enter from yard or garage*

# Utility Fleet Branch Shop Goes Modern

**Neat and bright, this small shop shows recent trends in layout and equipment**

*Each mechanic has his own mobile kit of hand tools. The complete set may be rolled to within easy reach when the man is working on a vehicle. Note neat arrangement of kit*



*A built-in ventilating system helps eliminate exhaust gases, keeps air in the shop reasonably fresh. Pipes connect to the vehicle exhaust, lead to a duct system in the floor*



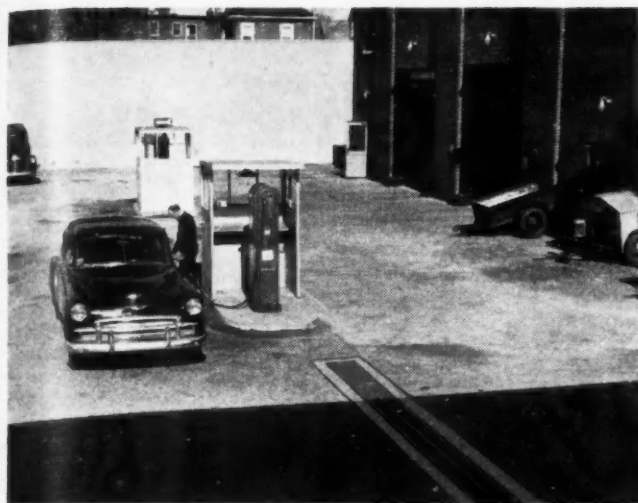
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Covered desks on pump islands protect pump man from weather. Concrete apron extends across yard from building, has radiant heating pipes for rapid snow removal



The shop lighting system eliminates efficiency-reducing glare and shadows, uses four rows of fluorescent mercury lamps. Note also the suspended air circulating units

Radiant heating is also built into the floor of the maintenance shop. It provides a comfortable working surface on which mechanics may lie while working under the vehicles.

With a fleet composed mainly of light and medium-weight trucks and passenger cars, a minimum of heavy-duty equipment is needed. Heaviest vehicles in the fleet are 26,000 lb line construction trucks. Pits have been omitted from the shop design, but one hydraulic hoist is used.

Under Garage Foreman Marshall Way the shop handles all maintenance on the vehicles stationed at the division with the exception of major

engine overhauls and rebuilding. On the day staff are two mechanics and a helper, while one mechanic, a washer and a general-duty attendant work the night shift.

#### Maximum Visibility

**THE SHOP** is designed for maximum visibility at all times. During the day a maximum amount of natural light is admitted through large windows which take up most of the east wall. This is supplemented with four rows of overhead fluorescent mercury lamps which are spaced to eliminate glare spots and shadows. This artificial lighting system pro-

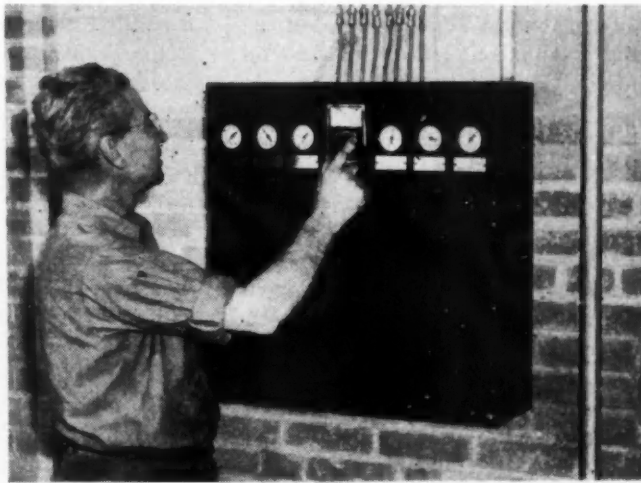
vides the night staff with practically ideal lighting conditions.

Equipment in the shop is arranged with an eye to neatness. With the exception of a hydraulic hoist near the south end of the shop and work benches extending along the east wall, most of the equipment is mobile and is kept along the side walls except when actually in use.

Hand tools for each mechanic are kept in specially designed rollaway tool boxes. These may be drawn up beside the vehicles so that all the necessary tools are within easy reach. Tools are arranged in the boxes for  
(TURN TO PAGE 122, PLEASE)

Lubrication and other under vehicle work is done using hydraulic hoists. Pits were considered unnecessary in the new shop since most units are light or medium weight

Master control panel for the radiant heating and air circulating systems is mounted on the shop wall. A simple turn of the center switch sets the yard apron heater to work



# There's Not Much Excuse fo

By Ernest S. Forest  
Assistant Editor

Following up on the prevention and control of shop fires, Jan., page 86, this story takes up the prevention of vehicle fires, shows how it can be done at little or no cost. Controlling vehicle fires poses special problems, will be discussed in a future issue. . . . The Editors.

## Analysis of Vehicle Fires Arising from Non-Traffic Accident Causes

| Cause of Fire                                  | Number | Per Cent | Cause of Fire                          | Number | Per Cent |
|--|--------|----------|--|--------|----------|
| 1. Mechanical Defect                           |        |          | Hot Tires                              | 140    | 17.4     |
| Lighting System                                | 63     | 7.8      | Reefer Unit or Cargo Heater            | 20     | 2.5      |
| Ignition System                                | 21     | 2.6      | Other Mechanical                       | 29     | 3.6      |
| Battery Cable                                  | 15     | 1.9      | 2. Non-Traffic Accident                |        |          |
| Other Wiring                                   | 14     | 1.7      | Non-Mechanical                         |        |          |
| Carburetor Backfire                            | 35     | 4.4      | Arson, Spontaneous Combustion, Etc.    | 23     | 2.9      |
| Carburetor Leaking                             | 15     | 1.9      | Cigarettes, Matches, Etc.              | 29     | 3.6      |
| Fuel Pump or Line Leaking                      | 69     | 8.5      | Fire From Other Source                 |        |          |
| Oil, Brake Fluid or Anti-Freeze Leaking        | 15     | 1.9      | Spreading to Vehicle                   | 42     | 5.2      |
| Muffler or Tailpipe Hot or Leaking or Backfire | 44     | 5.5      | Other Non-Mechanical Causes            | 30     | 3.7      |
| Fuel Tank Exploded, Ruptured or Felt Off       | 25     | 3.1      | 3. Non-Traffic Accident, Cause Unknown | 140    | 17.4     |
| Hot Brakes                                     | 35     | 4.4      | Total                                  | 804    | 100.0    |

IF YOU are up on your accident statistics, you know vehicle fires account for a relatively small percentage of total accidents. But do not forget, a fire accident usually leaves very little of the vehicle and its cargo, costs about eight times as much as a non-fire accident.

Digging a little deeper into fire accident facts shows there is not much excuse for vehicle fires; they are easier to prevent than to control.

Take a look at the burning truck on the opposite page. The percentages shown are based on 2208 fire accidents reported to the Interstate Commerce Commission during the years 1947, 1948, 1949 and 1950, the latest data available. Only vehicle fires occurring in interstate commerce and resulting in \$100 or more of damage are reported to the ICC, but the total is sufficiently large to give an indication of where to look to stop these fires.

Of the total, 1404, or almost *two-thirds*, resulted from traffic accidents! It is an oversimplification to say that vehicle fires resulting from traffic accidents—collisions, overturns or ditchings—probably wouldn't have occurred had the traffic accident been prevented. On the other hand, if you stand to prevent *two-thirds* of your vehicle fires by accident prevention, it does present a strong argument for an effective driver training program.

## It's Easier to Prevent Them

And how about the other 804 vehicle fires, the remaining third? The chart above, also based on the ICC Vehicle Fire Accident Reports for the four years, gives a detailed breakdown of their cause. Most of them can be stopped before they start. And to kick the props out from under the idea that the vehicle fires listed as "Non-Traffic Accident, Cause Unknown" could not be prevented by getting at the cause, remember that all fires have a cause and what this classification means is that *there was not enough left to tell what caused the fire*. Work to prevent fires from known causes and you will also prevent fires in this "unknown" classification.

### Fire Prevention

LET us have a look at fire prevention, see what can be done. Many effective accident preven-

tion programs are available to fleet operators as well as good preventive maintenance programs, so, rather than repeat these in detail, comment here is confined to specific fire prevention and fire fighting tips, that should be added to existing programs.

Most of the vehicle fire accidents listed in the above chart of "Non-Traffic Accident Fire Causes" can be prevented in the shop. Let us go down the line and check off what to look for.

In the fire engineer's technical language, fires need heat, fuel and oxygen in order to burn. One of the prime sources of this igniting heat in trucks is a spark from a short circuit in the electrical and ignition system.

First spot to keep an eye on to stop short circuit sparks is the fuse panel. If there is a short, these safety valves will prevent many a fire. Where fuses



# Use for VEHICLE FIRES

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| 100.0 |          |



## Them Than It Is to Fight Them

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have been replaced with wire or hairpins, it is asking for trouble, but this is not too usual in the average fleet. However, sometimes an extra lighting circuit is added and, rather than add an extra fuse, a higher capacity fuse is placed in the original line. Wiring and connections are engineered for a certain amount of current. Overloading the line with more circuits and a higher capacity fuse can easily mean a hot wire or hot connection that can start a fire.

Your PM program probably includes checks for worn insulation, loose connections, poor grounds and corroded battery terminals. After these defects are corrected, make another check to see why it happened, *eliminate the cause of the hazard.*

Water from a cooling system leak may be the cause of corrosion. Battery terminals may be loose because of road vibration due to a loose or

**Digging into vehicle fire facts, here is how driver training and preventive maintenance can work to prevent them**

broken battery carrier. Worn insulation may be due to a sharp corner, rubbing or oil and grease rot. Fasten wires out of the way of these dangers.

### Control the Fuel

**IT TAKES** heat to run an engine, so it is not always practical to control the heat source in preventing the fire. So, keep the fuel away from the heat.

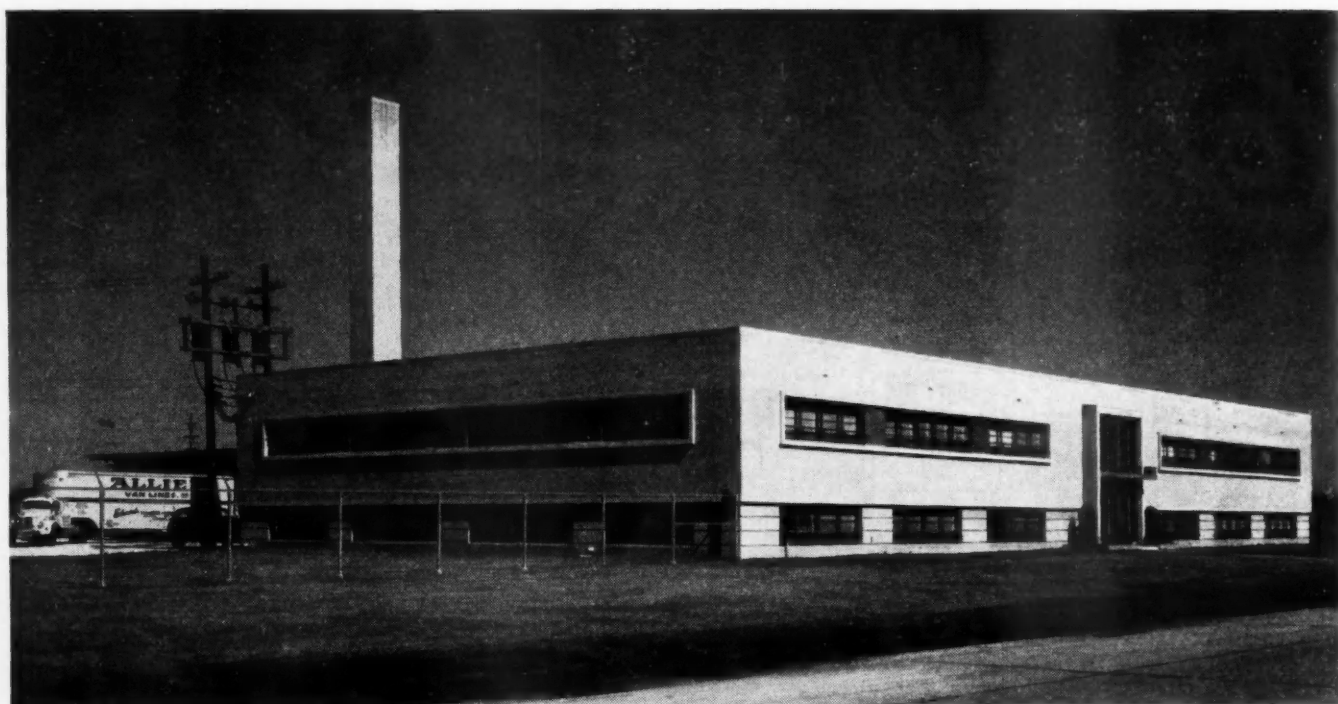
The engine area under the hood is a confined space. It does not take much gasoline vapor to result in an explosion and a roaring fire. Gasoline, diesel fuel, oil, grease and, in some cases, anti-freeze are all fire hazards under the hood. Oil and grease on an engine usually get there through carelessness, should be cleaned off. Radiator or other cooling system leaks, careless handling of anti-freeze are easily corrected or prevented. The fuel system requires a little more watchfulness.

If there is a fuel line leak, correct it, then find its cause. Maybe a water leak corroded the line. Perhaps vi-

(TURN TO PAGE 146, PLEASE)

# Allied Van Coordinates Scattered

# Tea



*Allied's new national headquarters terminal facility just outside of Chicago is one key in the plan for better operations*

**V** DURING the past three years Allied Van Lines has been conducting a three-pronged program to re-evaluate and streamline basic procedures pertinent to our nation-wide operations in the moving of household goods.

These improvements, or more accurately objectives, most of which are continually in the process of further development, include these major items:

1. Completed are modernized facilities at our national headquarters to provide maximum efficiency as the system's nerve center, routine maintenance facilities for long-distance trucks, and comfortable quarters for drivers from all parts of the country. Being planned are two new terminals, one in the New York City area and one in the Los Angeles area.

2. Greatly improved relations with

the 7000 local and long-distance drivers for some 600 Allied Van Lines agents with a view toward standardized selection and training procedures and a reduction of highway accidents.

3. A concerted effort to reduce claims and to make our claim prevention system more effective.

It is our belief that the program is all the more noteworthy when it is remembered that Allied Van Lines itself neither owns nor operates a single vehicle. Instead they are owned and operated by agents in more than 500 cities of the United States and Canada. Our job is to coordinate these independent operations into a working team that can perform safely and efficiently throughout the entire country.

Many a truck fleet operator bemoans the fact that he has a widely scattered fleet. Yet how many of

them are scattered throughout more than a few states and how few of them are involved with vehicles they neither own nor control? Ours is truly the optimum of a scattered fleet operation, yet we believe we are achieving excellent results that are greatly improving our operation and at the same time offering a considerable contribution to the all-important subject of better highway safety. Here is how we have gone about our specific objectives:

## National Headquarters

**THE HEADQUARTERS** office building is a two-story, modern design building, 156 ft long by 80 ft wide. This large building makes possible numerous office servicing conveniences not allowable at our old down-town Chicago headquarters. In designing the new building, special

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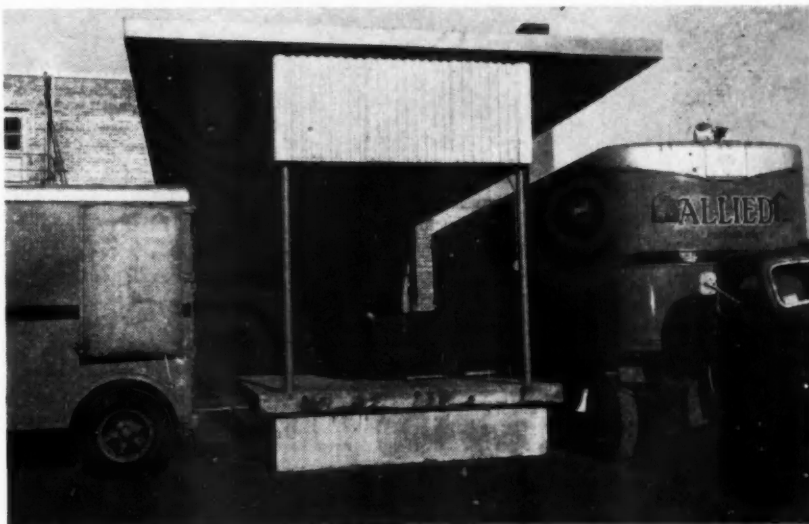
With greatly improved headquarters facilities Allied cooperates with 600 members to improve driver relations, claim prevention

**By M. T. McGuineas**

Manager, Sales Development, Allied Van Lines Inc., Broadview, Ill.



*There are 17 of these two-bunk rooms for drivers; also showers, lockers and a large recreation room above the truck dock area*



*Transfer dock, separate from main platform, permits transfer of cargo directly from city pickup truck to over-the-road trailer*

*Main handling dock with 16 overhead doors, 7000 sq ft and a minimum temperature of 50 deg provides plenty of space for sorting*



study was given to the smooth flow of all needed servicing operations for our nation-wide group of agents.

At the rear of the main office building is our 70 ft by 100 ft main handling dock. It has 16 outside loading doors of lift-up design, for service in van transfer, loading, and holding facilities. This ground floor holding room of 7000 sq ft is heated and kept at a minimum temperature of 50 deg. Extending back from the central rear also is a covered transfer dock, 10 ft wide by 44 ft long, for convenient across-platform exchange of cargo.

## Enter the Local Van

IT WILL be noted that our terminal facilities give special recognition to one important new operational trend of the industry in this day of large increases in national tonnage of  
(TURN TO PAGE 151, PLEASE)





Examples of truck stops in the plan are the one above at Abilene, Texas, and the one at right in Newton, Ala.

# Gulf Service Plan Aids

Designed to effect better control over drivers, equipment, and

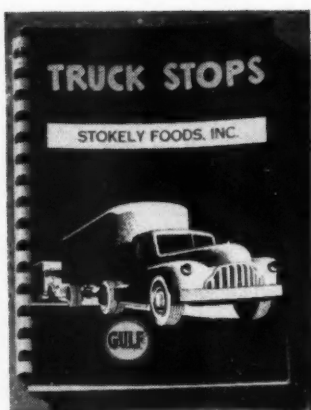


Fig. 3. Below. Driver following specified route uses card to locate truck stops.

Right. For irregular route operation, a full list of stops in the area is carried



SINCE 1946 Gulf Oil Corporation-Gulf Refining Company has been developing and perfecting service plans which satisfy the general desire of many fleet operators to effect better control over drivers, equipment, and purchases of petroleum products in their over-the-road operations. Known as the *Gulf Motor Carrier Service Plan*, this system incorporates features to cover wide flexibility of any operation and is tailored to meet the needs of individual operators. The Plan is designed to aid in the accomplishment of the following objectives:

1. Effect a clear-cut understanding between motor truck fleet operators and truck stop dealers about services and facilities on a good business basis.
2. Provide a means of close control of drivers and equipment between origin and destination points.
3. Standardize and restrict over-the-road purchases to minimum costs.
4. Eliminate the handling of cash and, in many cases, the free-lance handling of credit cards by drivers.
5. Establish specific quantities of motor fuel purchases at stops to prevent over-purchase away from the home terminals, depending upon the type of trucking operation.

## Information Guide Sets Pattern

A HAULER desiring to participate in this Service Plan first obtains an Information Guide form (Fig. 1) from a representative of the oil company.



Open 24 hours a day, both do repair and tire work, have room to park about 50 trucks, also have lunch room, showers and sleeping quarters

# Motor Carriers

purchases in over-the-road operations

## AUTHORIZATION FOR PURCHASE OF MOTOR FUEL

TRACTOR NO. 460  
ENROUTE 150 Gals. At Truck Stop # 9  
RETURN 45 Gals. At Truck Stop # 12  
DESTINATION: Abilene  
DATE: 5/11/53 A. L. Winter  
Dispatcher

Fig. 2. This form, filled out by dispatcher, controls purchase of fuel away from terminal

Fig. 1. Gulf uses information from this form to adapt plan to carrier's specific operation

This questionnaire, filled in by an authorized agent of the hauler, furnishes pertinent information regarding the hauler's trade name, complete address, equipment, territory covered, points where equipment may require service, capacity of tanks and average miles per gallon for each unit and other such data necessary to proceed with work of setting up the Plan. It is emphasized that operating systems which have been pursued for any length of time need not be abolished, and that the prerogative of adopting all or part of the recommended Plan remains with the hauler.

Upon receipt of the completed Information Guide form, the oil company furnishes the hauler with a brochure of instructions. It explains that the oil company is only an intermediary between the operator and the truck stop dealer and that success of the Plan requires careful planning along with close supervision and straightforward decisions.

### Nine Forms Aid Operation

APPENDED to the brochure is a section of Report and Recommendations. This section states that the (TURN TO PAGE 138, PLEASE)

## INFORMATION GUIDE

for Preparation of

### MOTOR CARRIER GULF SERVICE PLAN

(This questionnaire should be completed and signed by an official of trucking company)

- Name of Company \_\_\_\_\_ Phone \_\_\_\_\_
- Address \_\_\_\_\_ Street \_\_\_\_\_ City & State \_\_\_\_\_ Date \_\_\_\_\_
- Type of Carrier \_\_\_\_\_ Commodities Hauled \_\_\_\_\_
- No. Company-owned Trucks \_\_\_\_\_ No. Leased Trucks \_\_\_\_\_
- State No. of Trucks used in Over-the-Road Operation Only:  
(a) No. Gasoline Trucks \_\_\_\_\_ (b) No. Diesel Fuel Trucks \_\_\_\_\_  
Show "D" for Diesel and "G" for Gasoline
- Various Fuel Tank Capacities (Gallons) (1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_ (4) \_\_\_\_\_
- \*Average Miles Per Gallon for each (1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_ (4) \_\_\_\_\_
- TRACE ON A MAP ALL ROUTES OF OPERATION. (a) Use Gulf's Eastern and/or Western U. S. Map. (b) In "Remarks", list States and/or End Points of Operation for irregular route carriers.
- List Truck Stops Now in Use: (Fill in only if specifically designated and now using)  
Route No. Name Address Brand of Products  
(1) \_\_\_\_\_  
(2) \_\_\_\_\_  
(3) \_\_\_\_\_  
(4) \_\_\_\_\_  
(5) \_\_\_\_\_  
(6) \_\_\_\_\_  
(7) \_\_\_\_\_  
(8) \_\_\_\_\_
- Should we substitute for any or all of above stations? (Give Numbers) \_\_\_\_\_
- Approximately what distance apart would you desire "Stops"? \_\_\_\_\_ Miles
- Are Road Repair Services desired at "Stops"? Yes \_\_\_\_\_ No \_\_\_\_\_ Tire Service? Yes \_\_\_\_\_ No \_\_\_\_\_
- Does your equipment carry spare tires? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you presently have equipment P.M. and Safety Checked at "Stops"? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "No", would you be interested in a suggested example for this service? Yes \_\_\_\_\_ No \_\_\_\_\_

\*Miles per gallon are requested in relation to tank capacities so that we obtain miles per gallon for each type of trucking unit, i.e., straight trucks and tractor-trucks. (If there is a variance between Gasoline and Diesel units in miles per gal., note each.)

(over)

## **Multi-Stop Economics**

# **Choose the Right Body Type for th**

**Delivery and service trucks properly selected can improve driver efficiency, lower costs. As load-handling frequency increases, value of a "man high" body becomes apparent in lowered driver fatigue**

Here is the second of a series of articles on some of the phases of multi-stop, light weight fleet operation. Devoted to a discussion of the various body types, it follows last month's article on the relative merits of aluminum and steel bodies.

Conditions under which multi-stop fleets operate vary widely, but also play an important part in determining the type of vehicle and equipment needed for greatest operating economy. In fact, it is often true that there is a wide variation in operating conditions even among vehicles in the same fleet, so that a truck that is suitable for one route may be highly expensive to operate on another. For greatest efficiency, therefore, it is essential that purchase of equipment for multi-stop service should be made only after a study of the job requirements and of the various vehicles available has been completed.

**V** CHOICE of the proper vehicle is vitally important to fleets engaged in multi-stop operation; particularly in those cases in which driving is only a secondary phase of the routeman's job. For maximum economy it is essential that vehicles be chosen (1) to make the greatest effective use of the driver's time, and (2) to spend a minimum amount of time in the shop for repairs or replacement of parts.

At present there are three basic designs in popular use for multi-stop delivery in the light duty field: (1) the pick up or express model, (2) the conventional panel delivery truck, and (3) the forward-control, "double

capacity" units, available in either standard or custom models. Each is suited to a particular type of work and when properly applied and equipped with suitable component parts is highly efficient.

There are several different names for the third type of unit in the above list. We refer to the standard and custom designs offered by many manufacturers mounted on forward-control chassis with cab and body integral and featuring full standing room within the body. For convenience we will refer to these units in this article as "man high" bodies.

The pick-up or express body has

minimum initial cost and is most efficient for single-destination loads which do not generally require protection from the weather. The utility of this type of truck may be increased by installing canvas or metal covers for the load. However, the efficiency of this design decreases as the frequency of load handling increases, due to the relative difficulty of loading and unloading the cargo.

The conventional panel is also comparatively low in initial cost, due to the fact that it is turned out on a production line basis and uses a minimum amount of metal compared to the "man high" design. It is particularly suitable for starting new routes, for single-destination loads or for special service trips in which the main purpose is to transport the driver from call to call with a minimum cargo of goods or equipment.

### **Man High Body**

**F**OR operations which require many stops and much handling of the cargo, the "man high" body, either in standard or custom designs is usually most efficient, and worth the somewhat higher price (based on initial cost per cubic foot of loadspace, the cost is actually lower.) In some cases, special designs of the standard unit have been worked out, modifying dimensions to fit particular load requirements. Compared with the conventional panel, the "man high" design provides greater cubic capacity on the same wheel base and considerably greater ease of working the load on delivery operations.

Despite the rather obvious advantages of the "man high" design for multi-stop service, it is surprisingly true that there are many operators, particularly those with small fleets, who are still using less efficient units.



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According to data supplied by the Automobile Manufacturers Assn., of 848,009 trucks under 10,000 lb rating sold in 1951, only 28,867 were of the multi-stop design. Granting that many vehicles in this weight range are farm vehicles and special purpose units, the percentage of multi-stop design vehicles still seems remarkably small.

The majority of vehicles in multi-stop service are engaged in either of two duties, delivery of goods for a supplier to a customer, such as in retail delivery fleets, dairy and bakery fleets, etc., or as a service vehicle to move a technician and his equipment from job to job. In both types of service the "man high" body has many advantages, and it is safe to say that there are many fleet operators who have yet to realize this.

## Delivery Service

**B**ASIC aim of a delivery fleet, whether it is engaged in package delivery, bread or milk delivery or other retail delivery work is to move a maximum number of cargo units in the minimum of time at the lowest possible cost. With present high operating costs, the delivery cost per sales unit has an almost direct affect on the profit per sale. Thus it is essential that delivery costs be kept as low as possible.

Studies have shown that the driver's pay is the greatest single item in delivery costs. It is thus important to obtain the greatest possible number of deliveries for each hour worked by the driver in order to keep the labor cost per delivery as low as possible.

Choice of the most efficient route truck is an important factor in reducing delivery costs. Studies made by vehicle manufacturers have shown that the vehicle plays an important

part in determining the work which can be performed by a route man.

The "man high" design frequently means a time saving in making each delivery. Exact comparative data is not available, but for illustration, let's consider a route on which 120 stops are made in an eight-hour day. If a saving of 30 seconds is made at each stop due to greater accessibility of the load there is a total daily saving of one hour of the driver's time. At the present high rates for drivers, that's an important saving. The time gained can be used either by enlarging the route to include more stops or to permit the driver to spend more time

with present customers or in developing new ones.

Another advantage of the "man high" unit over the conventional panel is in the ease of handling the load when making pick ups or deliveries. There is less strain on a driver when he can stand in the vehicle while selecting items to be delivered, this means less fatigue and greater work capacity and has a direct effect on driver morale.

Have a theoretical example to show how man-high bodies can improve the financial picture for a route truck operator.

(TURN TO PAGE 158, PLEASE)



# Shop Hints

Here are some swell time savers for fleet shops.

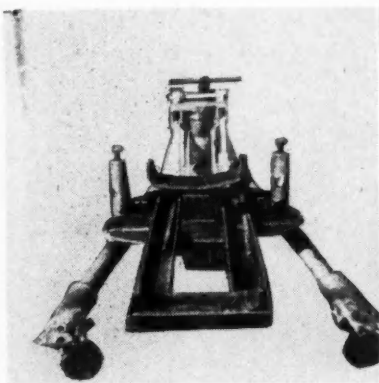
Let us have your ideas for new tools or short cuts

to service. We'll pay \$10 and \$25 for good ones.

**\$25**

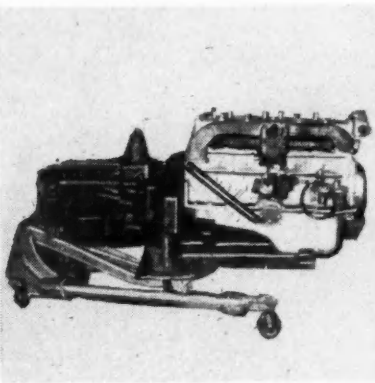
## Lift Handles COE Engines

By Andrew Camblin, Shop Superintendent, and  
Fred Maurer, Shop Foreman,  
Western Auto Transports, Inc.  
Denver, Colo.



This device is designed to cut removal and replacement time on engines in cab-over-engine tractors. The factory suggested method on Dodge COE tractors is to remove all front grille pieces and bring the engine out and in with a chain hoist. Using this device saves us about one-half the time of the factory method.

Construction of the unit starts with a modified front end lift with a heavy duty, hydraulic lift jack in the rear. On the lift section, add a cradle fitted to hold the engine and transmission. On this lift section, add two smaller lift jacks, one



on each side, far enough apart to contact the engine mounting supports. The large jack in the rear is used to raise and lower the engine, while the two smaller jacks are used to position the engine horizontally.

To use, the tractor rear axle is hoisted up onto metal stands to the height needed for clearance. The engine is lowered onto the lift and drawn out through the back. The picture above on the right shows the engine ready for installation including transmission, bell housing, clutch, manifolds, fuel pump, generator, starter, water pump and distributor in place.

## Jig Welded to Jack

By F. S. Thompson  
Charleston Transit Co.  
Charleston, W. Va.

Here is a heavy duty, hydraulic jack modified by welding a special, shop made jig to the jack platform for handling transmissions. The jig is

## Old Drive Shaft Easily

By Fletcher D. Fleming  
Associated Transport, Inc.  
Burlington, N. C.

This tow bar was made from an old Spicer drive shaft. Take two square plates, wider than the axle of the vehicle to be towed, and drill a 1-in. hole in each corner. Weld one of these plates to the flange end of the old drive shaft. At the slip joint

## Daily Filter Draining

By John Streiff, Jr.  
Quality Milk Service  
Burlington, Wis.

Daily draining of the primary filter on the 650 GMC diesel can be made easier by installing a petcock. Cut

## Handy Tool Removes

By J. B. Collyar  
Garage Foreman, City of Stillwater  
Stillwater, Okla.

Here is a solution to the problem of removing stubborn lug nuts from dual wheels. Take a piece of 1 1/2-in. pipe and weld on a hex socket approximately the same length as the outer lug nut. Cut off the pipe so the length, including the hex socket, is 13 1/2 in. On the opposite end from the hex socket, weld two bolts on opposite sides to hold two short handles.

Next, weld a lug wrench, 8 1/2 in. long, to a 27 1/2-in. long piece of

## Stand Holds Chuck for

By Frank P. Coulomb  
3932 West 64th St.  
Inglewood, Cal.

Here is a handy stand for storing two lathe chucks that makes it easy to position the chuck over the spindle of the lathe when needed for use. A "T" is constructed of 2-in. pipe of sufficient height to be mounted in a base that is bolted or lagged to the floor.

Two trolleys are then constructed, made with a ball bearing at the top and two side pieces of strap metal which are welded to a nut at the

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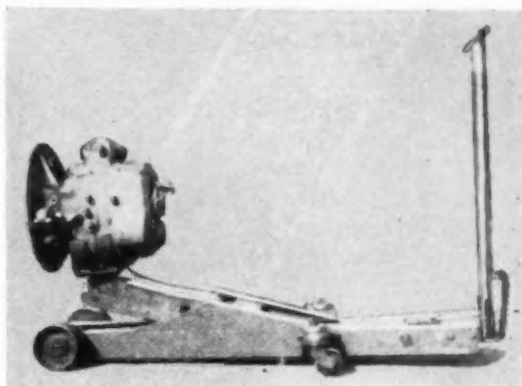
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## Eases Transmission Jobs

made from two pieces of  $\frac{3}{8}$  by  $2\frac{1}{2}$ -in. flat iron. The modified lift is used to pull and install transmissions of ACF-Brill C-27 buses.

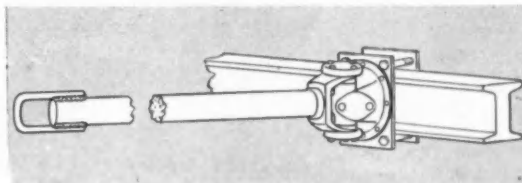
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## Converts to Tow Bar

end of the shaft, weld a U-bolt. In use, place the plate on the flange end of the drive shaft against the front axle of the vehicle to be towed. Put the second plate behind the axle and bolt it to the first plate. The U-bolt fits into the towing latch.

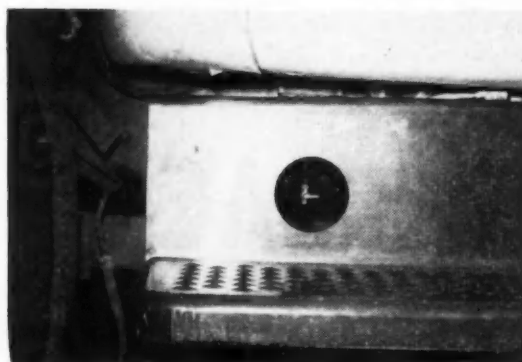
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## Facilitated by Petcock

a 4-in. hole in the skirt plate and install a  $\frac{1}{8}$ -in. pipe faucet type petcock on the filter, as shown.

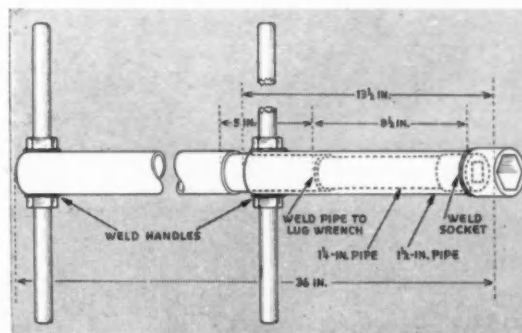
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## Dual Wheel Lug Nuts

$1\frac{1}{4}$ -in. pipe. Machine the lug wrench socket and the first 5 in. of the  $1\frac{1}{4}$ -in. pipe to fit inside the  $1\frac{1}{2}$ -in. pipe, as illustrated. Weld two nuts on the rear of the  $1\frac{1}{4}$ -in. pipe to hold two handles, similar to the  $1\frac{1}{2}$ -in. pipe. Fit the two pieces together, as shown. The lug wrench inside the  $1\frac{1}{2}$ -in. pipe will engage and hold the inner lug nut while the hex socket will engage the outer lug nut. By twisting the handle on the  $1\frac{1}{2}$ -in. pipe, the outer lug can be removed.

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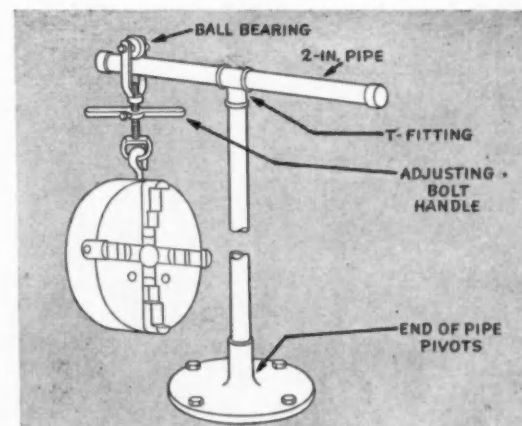


## Positioning in Lathe

bottom. The side pieces should be of sufficient length to accommodate the adjusting bolt.

A bolt to fit the nut is run through an oversize hole in a swivel link. A handle is then made with a set screw to fit over the bolt, and the bolt threaded into the nut. When chuck is to be used, the set screw on the adjusting bolt handle is tightened and, by turning the handle, the chuck can be lowered into position.

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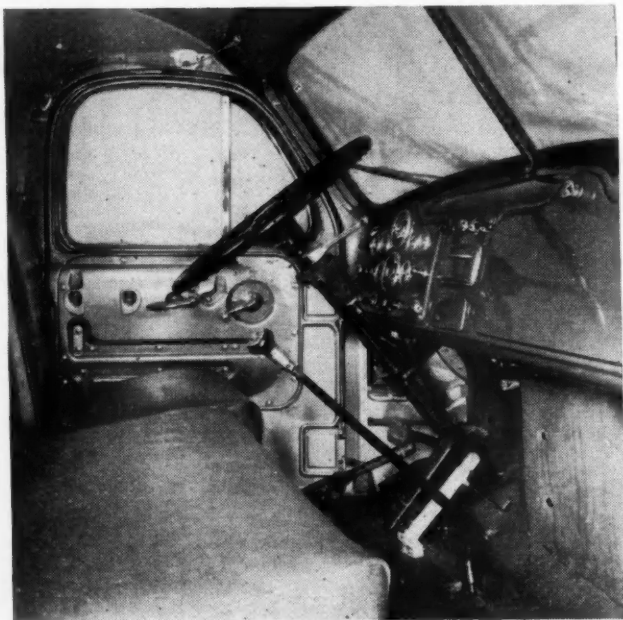


*Model B42T tractor typifies compact design of new Mack models. Bumper to back of cab is within 102 in. maximum. Step tank, illustrated, is optional*

## MACK'S New "B" Line

### Features Light-Weight, Compact Design

*Detachable door panels and instrument cluster, adjustable seat, aircraft type lights are among cab features*



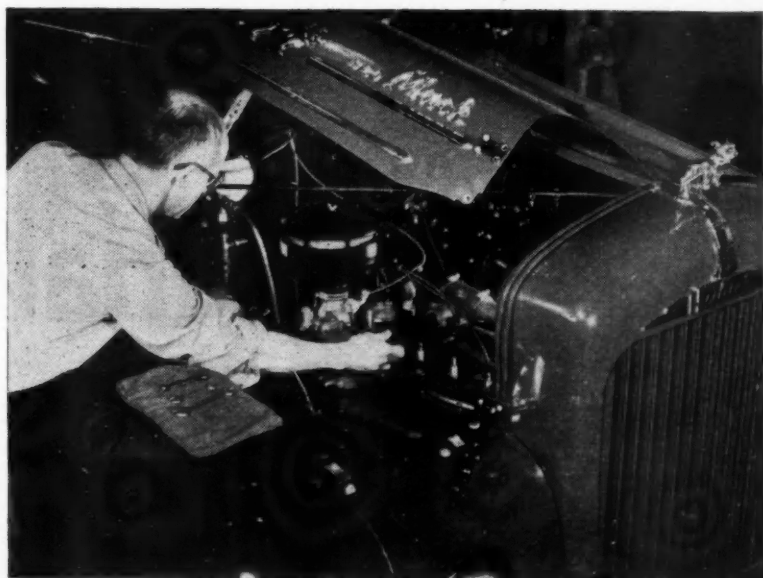
**M**ACK TRUCKS, INC., has just revealed details of its brand new "B" series line covering the popular weight range from 17,000 lb GVW to 70,000 lb GCW. Included are many basic models for both straight truck and tractor operation, most with an unusually wide variety of optional components.

Typical is the fact that there are seven engine models available including two light-weight diesels. The five gasoline engines have approximate cubic inch displacement of 291, 331, 401, 431, and 464 respectively. The last is a brand new engine developing 170 hp. The two diesel engines come in 510 cu in. and 673 cu in. sizes. Again the larger engine is a new model and details are promised for an early issue. All are Mack built.

New transmissions are designed to provide an ideal progression of ratios. Rear axles include single reduction, dual reduction, and double reduction, two-speed types. Six wheelers feature an improved, lighter-weight version of the widely-known Mack balanced bogie with inter-axle power divider.

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COMME



*Open top engine cavity and extra large hood give full access even to No. 6 cylinder. Side panels are also easily removeable*

**Five gasoline, two diesel engines power new series for highway hauling. Driver comfort and accessibility also featured**

#### **Less Weight, Compact Design**

**C**HIEF design features of the new B-line are reduced weight and compact design. Company officials insist that there has been no sacrifice in strength or stamina but point out that frames, for instance, have been made considerably lighter through use of high strength steel alloys. Axle banjos, transmission cases, and wheels all embody similar weight reducing construction.

The new styling is functional and efficient. The B Series has a short hood, bumper and radiator with the engine mounted well over the front axle, thus reducing the distance from front bumper to back of cab. On all but the smallest tractor models this dimension is within the recommended 102 in. minimum which permits use of maximum length trailers within 45 ft state length limits. There is also an improvement in axle weight dis-

tribution to increase payload without exceeding axle weight limits.

#### **Room to Work**

**A**CCESSIBILITY has also been given considerable attention. More working space is actually available around the engine despite compact design. Instead of the conventional dash board cave which makes the rear of most engines inaccessible, B Series design utilizes an open-top bay covered only by the hood which extends the full length of the engine. With hood raised, the entire engine top is exposed.

It is even possible to rebore the No. 6 cylinder by simply removing the hood. Other quick-detachable panels completely expose the sides of the engine providing plenty of room for fast, easy maintenance right down to the lower crank case.

#### **Driver Comfort**

**T**HE B Series cab stresses driver comfort, safety and durability. Driver's seat is separate and adjustable with foam rubber top over coil springs. Air circulation is provided by wing-type window ventilators and controllable cab vents. Inside door panels are quickly removable from the door, carrying the window mechanisms with them for easy adjustment.

There are non-glare aircraft-type map lights over each door. The instrument panel is quickly detachable and a central fuse block is located next to the glove compartment and covered by its door, with fuses labeled for instant recognition and replacement.

In addition to the B Series, Mack will continue production of the larger L-Models, the H-Model cab-over-engine tractors and the W-Model cab-over-engine trucks and tractors.

#### **New COE, 6 Wheeler**

**M**ACK has also announced a new six-wheeled, four-wheel drive, COE tractor designed to meet hauling demands of western operators.

The new model, No. W71ST, is powered by the 20 hp, 743 cu in., Cummins NHB diesel engine as standard, with the Cummins 275 hp, NHBS and the 300 hp, NHRBS optional. Front axle is 27 in. back of front bumper. From front of bumper to back of cab is 69 in. Of its 14,025 lb weight, 7300 lb are on the front axle.

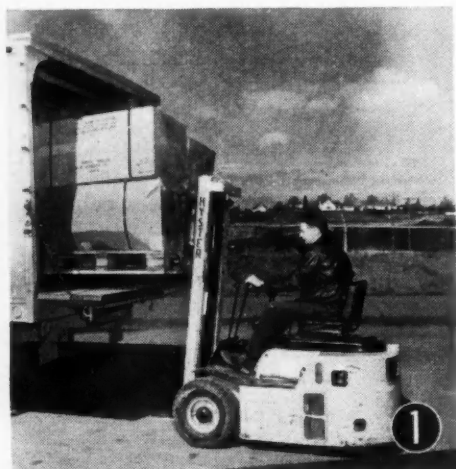
Heat treated aluminum alloy has been substituted for steel in some cases to obtain a weight reduction. Mack's four-wheel balanced bogie with the company's power divider acting as inter-axle differential is standard. Three wheelbases are available, ranging from 128½ to 206½ in.

A quick-demountable hinged engine scuttle, and removable side and top panels, floor boards and seats are featured. Removable instrument panel has slack in all wiring and tubing.

Dimensions are: (1) back of cab to centerline of bogie—114, 141 and 192 in., (2) distance from bogie centerline to end of frame—50, 50 and 144 in., (3) back of cab to end of frame—164, 191 and 336 in., (4) front of bumper to end of frame—233, 260, and 405 in., depending on wheelbase.

## Selected Items of Interest to Fleetmen at the

# National Materials



▼ DURING the first few days of the Fifth National Materials Handling Exposition at Philadelphia last month, officials estimated that more than 25,000 visitors would swarm over some 300 exhibits before the show closed. It would, of course, be impossible to comment on *all* of these exhibits or even to be sure of mentioning all in any one particular field.

But CCJ editors did cover the show, culled over great stacks of available material, and selected the 21 items shown here as being of particular interest to the average fleet operator.

The models shown here were selected only as typical examples of

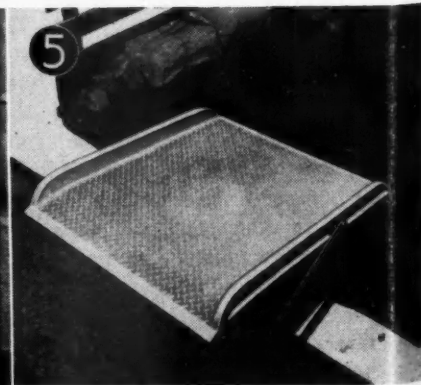
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1-Four new lift trucks were introduced by the **Hyster Co.**, ranging in size from a 3000 lb capacity model to a heavy duty unit. Model QN-20, a 2000 lb capacity model in the new line is shown here. It was exhibited along with several other of the company's lift, straddle and turret trucks . . . 2-Show-piece of the

**Anthony Co.** exhibit was the Anthony Lift Gate. Attached to the rear of a truck as shown, it permits rapid loading . . . 3-Diesel, gas, electric and LP gas-powered units were shown by **Clark Equipment Co.** Feature of the exhibit: the new experimental "X-70" lift truck, an engineer's conception of "The Fork Truck of the Future."

### ▼ Below

4-Six series of lift trucks and several straddle carrier models were shown by the **Ross Carrier Co.** One of the units is shown in a typical application in the accompanying photo . . . 5-A display of dock boards, mobile loading ramps, hand trucks and platform trucks was presented by **Magline, Inc.** . . . 6-Kalama-





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# Handling Show

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the equipment displayed by the various manufacturers. Most exhibitors displayed a variety of models and types of equipment, so that it would be impossible to represent the complete exhibit of each manufacturer on these pages with any degree of clarity.

Several new models and ideas were introduced at the show, illustrating new trends in design and functional equipment.

Each of the items shown is identified by a number. Readers may obtain additional data on any of these by writing the identifying number or numbers on the post card between pages 90 and 91, on the line marked "Materials Handling."

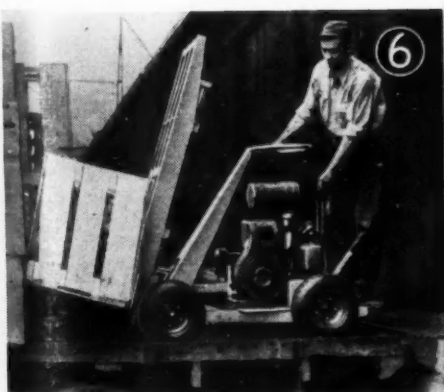
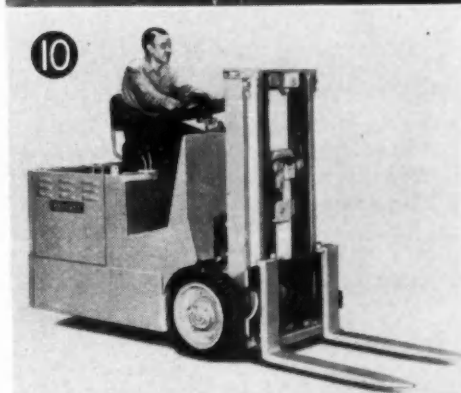
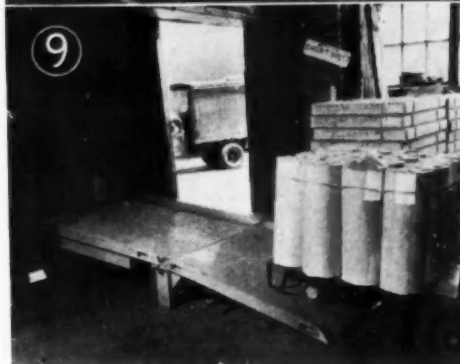
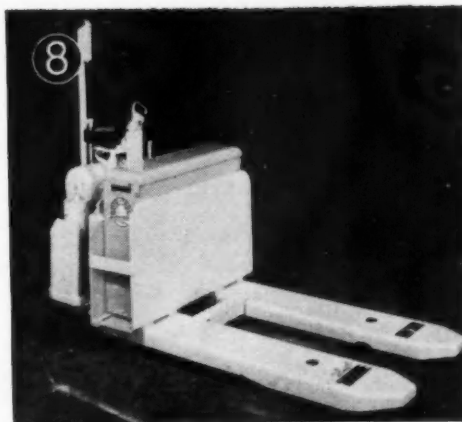
zoo Manufacturing Co. displayed its Speed Truck, Tractor and Xpediter lines. The Xpediter is shown in use here . . . 7-Seven models of portable hydraulic floor cranes and truck-mounted cranes were demonstrated by Ruger Equipment Inc. Three new models, a one-ton and two two-ton cranes were featured . . .

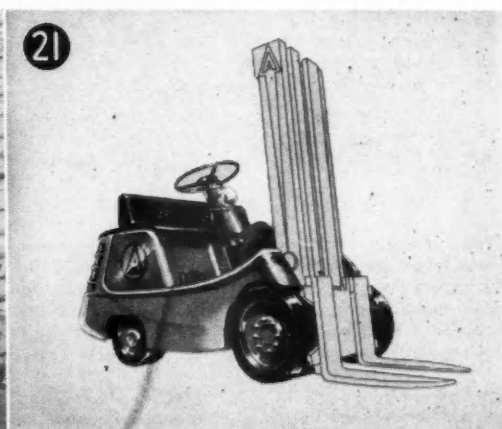
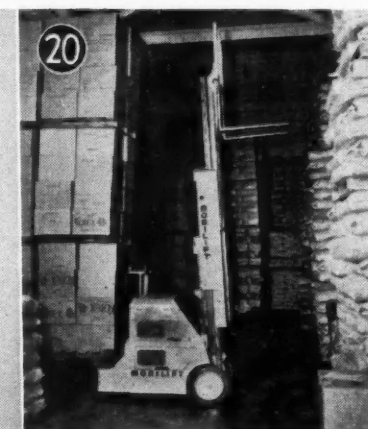
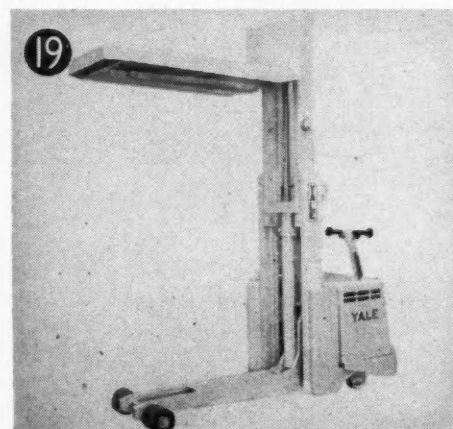
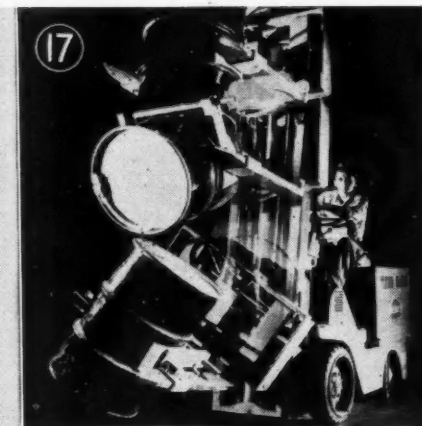
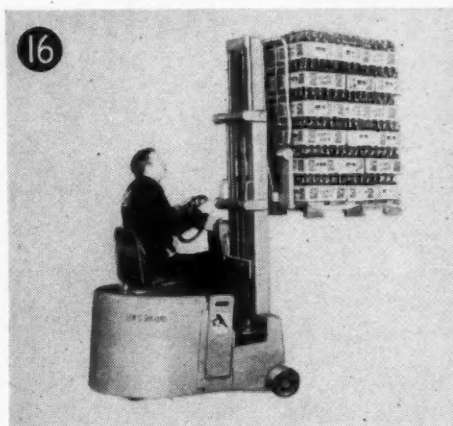
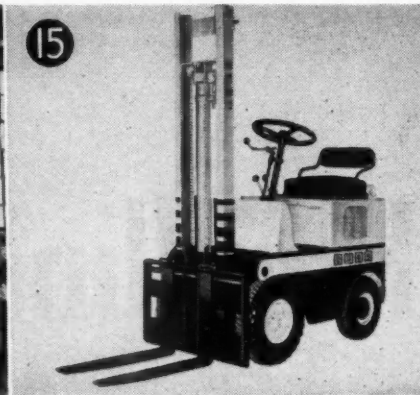
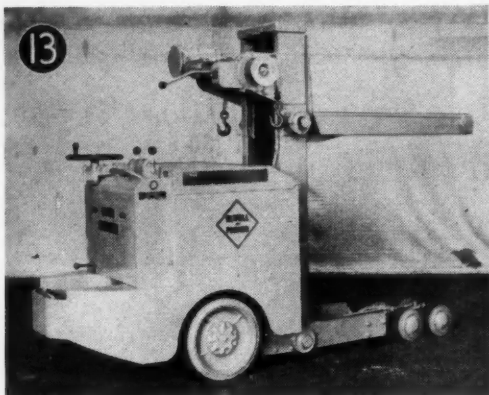
Right ►

8-Demonstrations of each of its various truck models were presented by the Moto-Truc Co. Featured in the display was the Bull Dog Grip-All tractor . . . 9-Lightweight equipment, including dock boards, ramp-dockboard combinations, hand trucks and a portable yard ramp were shown by the Magnesium Co. of America . . . 10-A new "Yak" Model 430, 4000 lb-capacity sit down electric powered fork lift truck was featured by the Mercury Manufacturing Co. Also in

the firm's display were several models of electric and gasoline industrial tractors, electric fork lift trucks and various types of industrial trailers . . . 11-Power steering and a new torque drive were introduced in models displayed by Towmotor Corp. The steering unit is said to permit a full turn of the wheels from sharp left to sharp right in five seconds with the driver's steering effort reduced by 80% . . . 12-Several models of hydraulic platform lifts were shown by Globe Hoist Co. Typical of the installation on a truck loading dock is the model shown here.

(TURN TO NEXT PAGE, PLEASE)





## National Materials Handling Show

Continued from Page 87

13-Display and demonstration of a variety of industrial trucks was provided by **Elwell-Parker Electric Co.** The exhibit featured the new model F-38T, a 2000 lb capacity unit . . . 14-The Crescent line of electric trucks and tractors and the complete line of hand lift

trucks and electric lift trucks and tractors were shown by the **Barrett-Cravens Co.** . . . 15-A complete line of new gasoline and diesel-powered fork lift trucks and industrial tractors was displayed by the **Buda Co.** One of the new models is shown here . . . 16-A variety of new and improved materials handling trucks for plant

and truck loading use were exhibited by **Lewis-Shepard Products Inc.** . . . 17-Two new fork lift trucks, each with 1500 lb capacity were introduced by the **Baker-Raulang Co.** as features of its line of equipment. An end-controlled, rider type model is primarily

designed for shipping dock and truck loading work. 18-Century Products Co. featured its Model 1000 and 1000-E manual and electric-powered hydraulic lift trucks . . . 19-With a travelling show to demonstrate new equipment and new adaptations of present

equipment, **Yale & Towne Manufacturing Co.** exhibited more than 20 fork lift and industrial trucks in gas, diesel and electric-powered models. A typical lift unit is shown here . . . 20-The Mobilift line of fork lift trucks were displayed by **Mobilift Corp.** One of the line is shown here . . . 21-An electrical transmission in a gasoline-

powered industrial truck was featured by **Automatic Transportation Co.** The infinite-step transmission has no mechanical connection from the engine to the drive unit, eliminating transmission gears and the need for hydraulic transmissions or overdrive mechanisms.



# Free

## PUBLICATIONS

FOR YOUR CONVENIENCE USE THE POSTCARD ON NEXT PAGE

### L1. Clutch Guide

Here is a brief—12 pages—but informative pocket-size guide to clutch troubles and how to cure them. It is divided into two sections.

The first section on clutch trouble shooting discusses the possible causes of the following clutch problems; dragging, grabbing, slipping, squealing, rattling and failure to transmit power.

The second section covers in step-by-step procedure the removal parts inspection and reassembly of the clutch. A complete section is devoted to misalignment and how to prevent it.

The last two pages of the book contain illustrations of the more common clutch cover assemblies including Rockford type TT and type 11, Auburn, Borg and Beck type 10A7 and type 9A6, Long type 9AB and type 10CF, Lipe, Buick and Chevrolet.

By circling L1 on the postcard on the next page, you can obtain a copy of this clutch trouble shooting guide.

### L2. Two-Speed Axle Data

Here are two letter size bulletins on maintenance and operation of Eaton 2-speed axles with electric shift controls and Eaton electric shift for Timken 2-speed axles. Well illustrated, the booklets show correct disassembly procedure, parts inspection, correct reassembly and adjustment. Lubricating specifications and filling and draining instructions for the axle are included. Operating instructions for both the axle and the electric shift are given in detail. You can get copies of these two bulletins by circling L2 on the postcard.

### L3. Freight Handling Data

This 20-page, 8½ by 11-in. booklet contains reprints of six articles on the use of aluminum in materials handling. The articles contain many ideas and

suggestions for streamlining freight and products handling that could well be adopted by for-hire and private carriers, both intercity and local. Subjects covered include pallets, containers, hoppers, conveyors, bins, cabinets, rollers, hand trucks, shipping containers, freight trucks, racks and hoists.

First article is from *Food Engineering*, Feb., 1952, listing and describing the uses of aluminum in food transportation and handling. Several examples are given of the time and weight saved.

Next is a reprint from the Oct. 11, 1952, issue of *Traffic World*. It is devoted entirely to materials handling in the transportation and shipping of various types of freight. Cited are examples of time saved using the equipment described.

A well-illustrated roundup of aluminum and magnesium materials handling equipment follows, reprinted from *Modern Materials Handling*, Jan., 1953. Private carriers will be interested in the illustrations of unit handling of products.

Other articles reproduced are from *Textile Age*, Sept., 1952, *Aluminum Bulletin*, Spring, 1952, and *Ceramic Industry*, Mar., 1952, and should supply fleetmen with many ideas on lowering their freight handling labor cost. You can obtain a copy by circling L3 on the postcard.

### L4. Brake Guide

This 28-page, pocket-size brake servicing guide opens with a section on drum scoring and a section on good brake shop practice. Following these two general discussions, the book is divided into descriptions of various specific brakes, a section on the causes of brake troubles with a special list of air and vacuum brake troubles, and concludes with a 30 point check list on a complete brake job.

Types of brakes described include:

Bendix two-shoe, double-anchor mechanical; Bendix two-shoe, single-anchor, mechanical; Bendix single-piston, hydraulic; Bendix double-piston, hydraulic; Bendix non-servo, double-anchor, hydraulic; Lockheed internal, two-shoe; Lockheed two-cylinder, hydraulic; Lockheed hydraulic, single-anchor; Wagner Lockheed self-centering, self-adjusting; Wagner hi-tork; Wagner hi-tork, type F and type FR; Huck hydraulic; General Motors Huck mechanical; Ford mechanical; and Lockheed Ford. Operation, adjustment and relining procedure are included.

The trouble shooting section includes parts on low brake pedals, spongy brake pedals, brake noises, erratic brakes, non-holding brakes, dragging brakes and brake grab.

Circle L4 on the postcard on the following page to obtain a copy.

### L5. Oil Filter Chart

This oil filter chart provides a cross-reference list of the various makers model numbers of interchangeable oil filter elements. Included on the chart are specifications for Dodge, Chevrolet, Ford, GMC and Studebaker trucks. Circle L5 on the postcard for your copy.

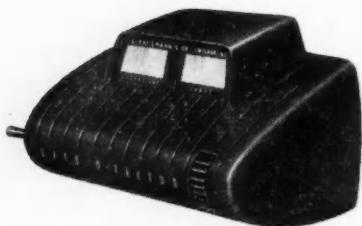
### L6. Ford Valve Manual

This 50-page, 5 by 7-in. book is the seventh edition of a manual on servicing valves in all Ford-built engines from 1928 to 1953 inclusive. It includes the Model No. A and B, 4 cylinder engines as well as the latest V-8, valve-in-head engines. With 84 illustrations and 18 chapters, the booklet describes in step by step detail all phases of valve repair, servicing and operation. Included in a tool chart showing the correct tool combinations for the various jobs. To obtain your copy, Circle L6 on the postcard.



# NEW Products

ADDITIONAL DETAILS AVAILABLE UPON REQUEST VIA POSTCARD

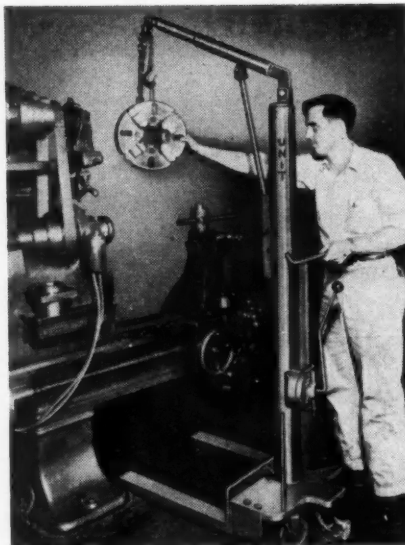


## P1. Circuit Breaker

E. Edlmann and Co., Chicago, has announced a new, Model No. 125, "Lite-d-tector and Automatic Reset Circuit Breaker." Installed in the low amperage circuit of a truck, trailer or bus, the unit automatically signals short circuits and light failures to the driver and provides independent flood-light protection in emergencies. It eliminates use of fuses, can be mounted on the dash and can be adjusted for any power load. Red flashing indicates everything OK. A steady red light indicates a 6 amp, minor short. A steady amber light indicates that two or more clearance lights are out. When this happens a 7-in. red flood-light automatically goes on to protect the vehicle. Serious trouble, such as a 30 amp short, is indicated by alternating red and amber flashing and the red floodlight also is automatically turned on, flashing with 4-sec beams at 1-sec intervals.

## P2. Caravan Top

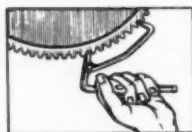
A Caravan Top that converts any stake body type truck to a "panel" cargo carrier, and gives all-weather protection has been developed by the C. K. Turk Corp., South Bend, Ind. Slide fasteners on either side of the back curtain permit quick loading and unloading. Floor-to-ceiling clearance is provided by aluminum bows that are quickly and easily assembled by use of metal slip holders installed on top of the stake slats of the truck. Five longitudinal slats built into the top of the Caravan Top provide the necessary supporting strength. They are fabricated from No. 10 water and mildew resistant duck.



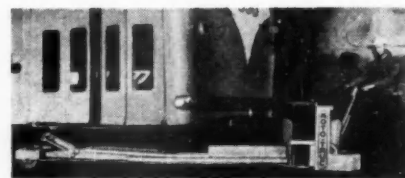
## P3. Three Way Lift

The "3 in 1" shop truck just announced by Unit Mfg. Co., Minneapolis, Minn., is a new, hydraulically-operated unit that handles lifting jobs within its capacity whether they require a boom, forks or platform. The boom makes possible lifting to 8 ft. The switch of one pin is all that is needed to put the forks into operation. They need only 3 1/4-in. clearance and will lift a pallet to 55 in. To lift non-palletized loads, a platform is locked over the forks. 750-lb loads are eased up by one hand operation of a 5000 lb hydraulic system. The base is only 22 1/2 x 33 in. It has a foot operated lock brake.

## P4. Flywheel Rotator



A flywheel rotating tool, Model No. TL-163, to replace the much used but awkward screwdriver method of positioning the flywheel has been introduced by Accurate Parts Co., Cleveland, Ohio. The tool, of welded steel construction, provides adequate leverage so that flywheels may be quickly and easily rotated.



## P5. Vehicle Mover

New vehicle mover, just announced by The Moto-Truc Co., Cleveland, Ohio, is a powerized heavy duty floor jack. With a few simple operations a truck or bus weighing up to 25,000 lb is ready to be moved around the shop. Frame is heavy steel plate, welded and assembled together to form the chassis. Chassis length is determined by and made to accommodate your particular vehicles. It is powered by a heavy duty, 18-volt battery. Two speeds for both backward and forward movement are provided.

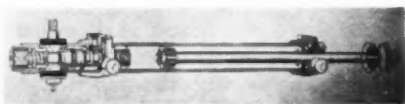
## P6. Nylon Tarpaulins

Vinyl coated nylon tarpaulins have been recently introduced by The Springfield Tent and Awning Co., Springfield, Ohio said to provide greater strength and durability with a minimum of care and weigh less than half that of ordinary cotton duck tarpaulins, the new tarpaulins incorporate a nylon fiber base with a vinyl coating to insure complete waterproof protection. With temperature tests ranging from 180 to minus 57 deg F., they were found to resist heat, cold and mildew, as well as gasoline, oil, chemicals and abrasion with no appreciable loss of tensile strength. They are available in both 5 and 9 oz weights.

## P7. Pressure Purger

A new portable pressure purger, Model No. P-195, is being marketed by Choldun Mfg. Corp., New Haven, Conn. It power flushes the entire cooling system without removing the radiator, and locates faulty radiators, thermostats, fan belts, hoses, clamps and gaskets.

CIRCLE APPROPRIATE NUMBERS ON POSTCARD FOR MORE INFORMATION



### P8. Power Steering Unit

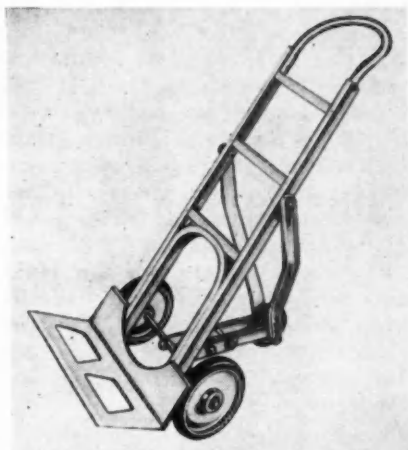
Monroe Equipment Co., Monroe, Mich., has introduced a new power steering unit that can be installed on used cars, trucks and tractors. Although the cost of installation on used vehicles—about \$225—will be higher than installation as original equipment, the unit itself is still relatively inexpensive, about half the cost of other power steering units according to the manufacturer. The unit is operated by a standard type hydraulic pump mounted on the engine which pumps the oil under pressure to the valve and cylinder which is contained in a single tube. The compact unit—only 35 parts—reduces the number of hoses and fittings required and can easily be attached by any experienced mechanic. The hydraulic cylinder and valve assembly replaces the drag link in the conventional steering system. It responds when pressure of 3 lb or more is applied to the steering wheel. This is translated into hydraulic pressure of up to 750 lb.

### P9. Load Binders

Load Binders made by Canton Mfg. Co., Canton, Ohio, are available with the owner's name on the handle in raised letters.

### P10. Roll Handler

A roll handling attachment for the "Walkie" type electric truck in the Powrworker line has been announced by Clark Equipment Co., Battle Creek, Mich. The attachment picks up rolls of newsprint, fibre board, fabric or any product in rolls, from either vertical or horizontal positions, in and out of storage to a height of 130 in. Hydraulic clamps handle rolls varying in diameter from 24 to 42 in. and weighing up to 2000 lb.



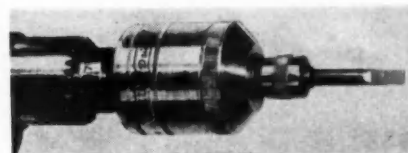
### P11. Hand Truck

A new magnesium hand truck, with a fully retractable third wheel, has been announced by Magline, Inc., Pinconning, Mich. According to the manufacturer, this feature makes carting and wheeling of the heaviest loads considerably easier. When the wheel is extended, the truck can be operated in a three-point position, preventing any load from bearing on the operator. For conventional use, the third wheel retracts snugly against the frame. The new model is of all-magnesium construction. The nose unit extends beyond the wheels on either side, preventing flexible loads from binding against the wheels. All parts are mechanically joined and all parts are replaceable when worn.

### P12. Spray Gun



Delivering over 90 lb of pressure at 7200 strokes per min, a new spray gun announced by Waldorf Sales Co., Yonkers, N. Y., needs no compressor, plugs into any AC electric outlet. The lightweight, Underwriter Laboratories approved unit has a trigger action and is of all metal construction.



### P13. Drill Adapter

The new Dril-O-Driver, product of the Drilo Corp., Pittsburgh, Pa., converts electric drills into impact screwdrivers that will handle 54, 1/4-in. drive, standard tool accessories now on the market. The unit's cone drive construction permits the operator to control the force and speed from 0 to full speed of the electric drill. It comes assembled ready for use and fits into the drill chuck.

### P14. Engine Heater

Being introduced in this country by Devenco, Inc., New York City, a new engine heater utilizes the pulse-jet principle which powered the German V-1 buzz bomb. The unit, trade named, "Swingheater," when used with a heat exchanger will also warm truck and bus interiors. The pulse-jet principle relies on a pressure wave. In the heater, the sudden wave-generating impact is created by the first explosions resulting from glow-plug ignition of a fuel-air mixture in a combustion chamber. The glow-plug is activated by connecting the system momentarily with a storage battery. When the decrease phase of the wave occurs, there is a partial vacuum which sucks in air (via a one-way valve) and gasoline (through a carburetor) into the combustion chamber. This is immediately followed by the increase phase, which subjects the fuel-air mixture to pressure, thereby sharply increasing its temperature. This temperature rise, plus the residual heat from the previous explosions, is enough to re-ignite the mixture. This suck-explode cycle occurs 80 times a second.

After the initial explosions, the system works automatically, even though

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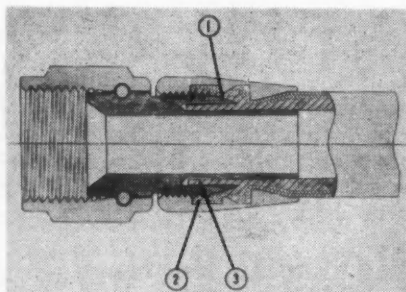
# New Product Descriptions

Continued from Page 91

the battery has been disconnected. The system has only one moving part—an easily replaceable plastic flutter-valve in the air intake. Also, lubrication is not required. The engine pre-heater is connected to a motor's cooling system by intake and outlet pipes. As the coolant is heated, it moves from the device through the engine and back again, with this circuit being repeated many times. In tests, the device has raised engine temperature from minus 70 deg F. to operating level in relatively brief time. Its heat output is 20,000 Btu an hour from 1.5 pints of gasoline.

## P15. Hose Fitting

Aeroquip Corp., Jackson, Mich., has announced a new type hose fitting. The reinforcing braid (2) of the hose alone is clamped, while the fluid-tight



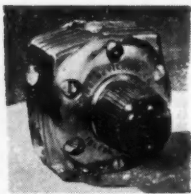
seal is accomplished by (1) separating the inner tube from the braid and using it as a "lip" seal (3) in an annular chamber. It is assembled without prior preparation of the hose-end. The main advantage of the fitting lies in the reduction of compression of the rubber or rubber-like inner tube.

## P16. Metal Cleaner

Two new products, Lumin Cleaner and Lumin Wash, are said to reduce by approximately 66 per cent the cost of cleaning aluminum, stainless steel and chrome surfaces, have recently been developed by Lumin Sales Corp., New York City. In addition to cleaning, they are designed to protect these metals from discoloration, oxidation, corrosion and pitting by providing an invisible coating against elements in the atmosphere that cause such deterioration.

If oxidation, discoloration or corrosion has already occurred, the cleaner is used first to remove them. This is done by rubbing it on the metal surface, then washing it off with the wash. This wash leaves an invisible protective coating on the metal surface.

## P17. Air Regulator



An air regulator, capable of handling a large volume of compressed air with a minimum of pressure drop, is being marketed by DeVilbiss Company, Toledo, Ohio. Designated as Model No. HAA, it has a capacity of 80 cfm at 100 lb line pressure. More sensitive control and reduced pressure losses are claimed through using air pressure against the regulating diaphragm instead of the conventional spring-loaded diaphragm, making adjustment of the control knob easier when regulating air pressure. Air flow increases as demand increases without affecting the pressure which has been set. Maximum pressure which can be regulated is 135 psi and maximum line pressure is set at 300 psi. The new unit is about 3 in. wide and 4½ high.

## P18. Step Plate

A new high-visibility step plate with white safety step nosing integrally molded to black rubber step tread is announced by Samuel Moore and Co., Mantua, Ohio. It is composed of a 5/16-in. thickness of white rubber on the step edge and the same thickness of black synthetic Rub-Bub compound on the tread. Both nose and tread are molded in one piece, and bonded to a rigid punched metal backing.

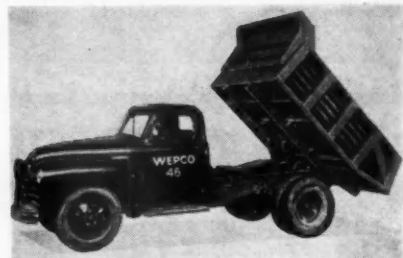
## P19. Rust Preventer

"Formula No. 50," a new method of surface protection of iron and steel has been developed by Constad Laboratories, New York City. It is said to offer the advantages of hot dip galvanizing. Applied easily with a paint brush or spray-gun (60-90 lb psi with a number 4 nozzle), it takes an hour to dry. One gallon will cover 500 square feet. It can be used over rusted surfaces when loose scale is removed.

## P20. "Hot" Body

A special 5.3 yd corrugated steel dump body for hauling "hot materials" is announced by the Galion Allsteel Body Co., Galion, Ohio. Weighing 2730 lb, it was designed primarily for hauling hot slag but is suitable for other

uses such as transporting heated aggregates for roof coating and flooring, "hot mix" road materials, hot castings, etc., and also recommended for jobs involving heavy shovel loading of extremely abrasive materials. Hoist cylinder, pump, and control valve are pro-



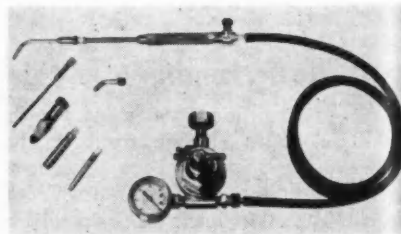
tected from the heat by an asbestos lined steel cover, designed and mounted to move freely with the action of the hoist cylinder. Body sides and floor have full length corrugations. Sides are constructed of 8 gage steel and the floor is ¼ in. steel plate. Sides fold into the body floor at 45 deg to prevent material from lodging in corners. Overall body length is 114 in. including a 30 in. scow with a 15-deg angle. Inside body width is 82 in. with 31 in. sides and head.

## P21. Lift Hoist

A new model "Zip-Lift" electric hoist with rope control is announced by Harnischfeger Corp., Milwaukee, Wis. It is a standard "Zip-Lift" designed to be operated with a new one-hand rope control. It is designed with a weight-overload safety factor of five times rated capacity. Wire rope hoisting is used. Other features included are double brakes, oil bath lubrication, fully-enclosed construction, and grease-packed motor bearings. It comes in two models with lifting capacities of 500 and 1000 lb. Hoisting rates are 25 and 13 ft per min.

## P22. Acetylene Torch

A new acetylene torch outfit recently placed on the market by Torit Mfg. Co., St. Paul, Minn., uses only acetylene gas, from a Presto B tank, yet de-



velops a temperature of 2800 deg F. Only a few pounds pressure is required for operation. The torch can be turned off and on by a built-in valve on the torch handle.

(TURN TO PAGE 218, PLEASE)



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# Bendix

## "TONNER" HYDROVAC POWER BRAKE

For 1/2, 3/4 and 1-TON TRUCKS

# SPEEDS DELIVERIES!

With conventional brakes it takes plenty of pressure on the brake pedal to stop a light truck—especially when there's a load on the back. And, drivers of light trucks do one whale of a lot of pedal pushing—on a stop-and-go route . . . city-wide deliveries . . . or just doing general hauling. As a result, the driver slows down a little, takes it easy about getting from one delivery point to another. What's more, in many cases it just isn't safe to travel at the permitted speed limits with conventional brakes. It all boils down to the same thing—*slower deliveries*. You can avoid all this with a Bendix\* "Tonner" Hydrovac\*, a power brake designed for 1/2, 3/4 and 1-ton trucks. It *cuts braking effort in half* . . . results in *quicker, safer stops*. A feather-light touch of the brake pedal and the "Tonner" instantly takes over the heavy part of the braking job. For faster, more efficient deliveries and better driver morale, put a "Tonner" on every light truck in your fleet.

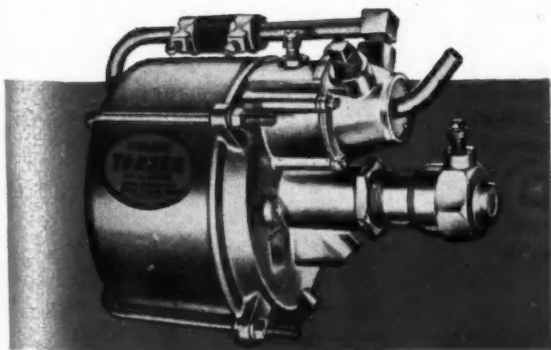
\*REG. U.S. PAT. OFF.



## Bendix SOUTH BEND

PRODUCTS DIVISION INDIANA

Export Sales: Bendix International Division, 72 Fifth Avenue, N. Y. 11, N. Y. • Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada



### ONE DEMONSTRATION PROVES THE NEED!



Ask your dealer or distributor for a test drive in a truck equipped with the "Tonner" demonstrator. It has a special "on-off" switch so that you can try both kinds of stops. Make a stop using only conventional brakes!

Then throw the switch "on" and put "Tonner" to work. Unless we miss our guess, you'll be convinced on the spot when you see how quicker-acting, surer-stopping the brakes become.

# Ten States Schedule Rodeos

Others are pending, will be announced later. 1953's National Truck Rodeo, separated from the ATA Annual Convention, will be held in Minneapolis-St. Paul, September 15-19

THE 1953 ATA National Truck Rodeo is scheduled for the Minnesota State Fairgrounds in the twin cities of Minneapolis-St. Paul September 15-19. Unlike previous years, the Rodeo will not be held in conjunction with the annual ATA convention this year.

Discussing separation of the two events, John V. Lawrence, ATA managing director, said: "The ATA National Truck Rodeo has outgrown our original conception to the extent that it is no longer feasible to hold it at the same time and place as our convention. The favorable impact of the Rodeo on the industry's safety work requires that we let it continue to grow and expand to its true stature."

The 1953 Rodeo schedule calls for registration of State champions on Tuesday, September 15, with written examinations and appearance tests on Wednesday, semi-final driving competition Thursday and Friday, and the finals on Saturday, September 19.

## Rule Changes

THE BASIC plan for conducting a state or local rodeo and the national contest have not been altered but new techniques include introduction in the field test judging whereby the judges will indicate with arm and hand signals the points earned or lost by the contestant as he negotiates the course.

Among other changes is a new mental hurdle created by a rule that the contestant in the straight truck class must complete the field course in eight minutes. If he runs over that time he is disqualified. Similarly, a 10-minute maximum is set for running the course in all other vehicle classes of competition. The course times were the same prior to the rule revision, but formerly a contestant completing with-

| 1953 State Truck Rodeos |                |            |               |                       |
|-------------------------|----------------|------------|---------------|-----------------------|
| State <sup>1</sup>      | When           | Where      | Classes       | Estimated Contestants |
| Connecticut             | June 27        | Middlebury | S, SA, TA     | 100                   |
| Illinois                | July 30-Aug. 1 | Peoria     | S, SA, TA     | .....                 |
| Maryland                | Aug. 7-8       | Baltimore  | S, SA, TA     | .....                 |
| Michigan                | Aug. 5-8       | Lansing    | .....         | .....                 |
| New Hampshire           | Not set        | Not set    | S, SA         | 30                    |
| North Carolina          | June 5-6       | Asheville  | S, SA, TA     | 100                   |
| Pennsylvania            | Aug. 19-22     | Hershey    | S, SA, TA     | 75/100                |
| Virginia                | Not set        | Not set    | .....         | .....                 |
| Washington              | Aug. 28-29     | Yakima     | S, SA, TA, TF | 70                    |
| Wisconsin               | Aug. 22-23     | Mauston    | S, SA, TA     | 35/50                 |

<sup>1</sup> As further states schedules are set, they will be reported in the monthly news roundup. A local rodeo will be held in Fort Wayne, Ind., on June 7.

in a specified shorter period received point credits, and, conversely, if he took longer he received demerits from his score.

To compensate for removal of the possible time credit score, the revised rules have standardized allowable credits at 50 points for each problem. All demerits have been standardized at 5 points each.

The revised rules provide that ATA will supply upon request to each affiliated state truck association field test problems from which the state association may select six for its course if that many are included in the contest.

The revised rules provide that the actual test course of the National Truck Rodeo be kept secret until the actual running of the rodeo. State associations are urged to follow this idea and keep their own test patterns separate until the running of their own rodeos.

Rules to be used in truck rodeos are as follows:

Contestants in each class of competition are allotted a maximum time to complete the driving skill tests. The

maximum time to negotiate the course for each class of competition will be announced to all contestants before the running of each class of competition. A maximum running time of eight (8) minutes for the straight truck class and ten (10) minutes for all other classes is recommended. When the determined allotted time elapses before the contestant finishes the skill tests the contestant will be disqualified.

No point score will be allotted to the contestant in so far as the time of running the field tests is concerned. A maximum time to negotiate the course will be established in each class of competition and the contestant failing to complete the course in that time shall be automatically disqualified from the contest. To win, the aspiring champion must be a smooth, safe and accurate driver.

Problem values are assigned as follows:

Field Tests, (300 points); Equipment Defects Problem, 10; Driving Problems—Offset Alley, 50; Serpen-

(TURN TO PAGE 130, PLEASE)

# CHROME

reaches its greatest effectiveness in  
**Sealed Power KromeX**

## FULL-FLOW RING SETS



1 Top compression ring of chrome-alloy cast iron has solid chrome face, factory-lapped to a light-tight finish, with sides Granosealed for greater flexibility.

2 MD-50 Steel Oil Ring with the Full-Flow Spring has chrome-faced side rails for double mileage, with sides Granosealed for greater flexibility.

3 All rings in Sealed Power KromeX Ring Sets are beveled or tapered to threadline contact for quicker seating and blow-by control.

23 leading engine builders now use Sealed Power chrome rings!



SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

## Sealed Power Piston Rings

BEST IN NEW TRUCKS

BEST IN OLD TRUCKS



# Nickle Plate Letters Stay Put

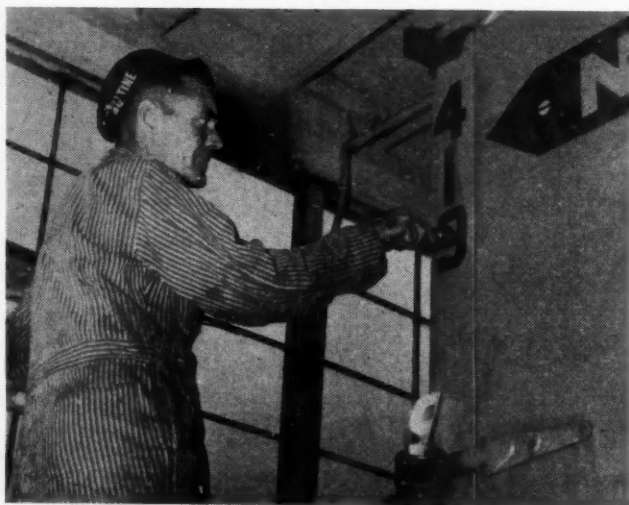
By Sam Hayes, Maintenance Superintendent  
Nickle Plate Lines, Portland, Oregon

Scotchlite reflective materials cut from templates save time and money for this fleet. Signs are as neat and attractive as decals



*Suitable letters or numbers can be produced by an unskilled man tracing around templates with a sharp edge.*

*Lettering is easily applied by activating the adhesive backing and smoothing on the vehicle with a rubber roller.*



## NICKLE PLATE

AT THE paint shop of Nickle Plate (a dry freight line) of Portland, Oregon, we here had considerable trouble with peeling on decals used for signs and numbers.

For the past year we have been using Scotchlite in 5 inch width rolls. Templates, both numbers and letters, are cut from light sheet metal and filed alphabetically and numerically in a partitioned cabinet.

In preparing the numbers, the template is placed on the reflective material and a line drawn around it with a sharp pencil. The letter or number is then cut out with scissors or a razor blade.

The background of the sign for the truck or trailer is masked and then sprayed with the desired color. When the background is dry the letters or numbers are applied.

In order to apply these letters properly, the backs of them are first activated to make them adhesive. After the letters or numbers have been placed on the sign, they are rolled with a rubber roller. We have now been using this material for more than a year and we have had not one single case of peeling.

The following are the advantages for this new sign technique.

1. The work does not require an experienced painter.
2. It can be done in a limited paint shop or any spare floor area with a minimum of equipment.
3. The Scotchlite signs are as neat and attractive as decals and more attractive than most painted signs.
4. The numbers and letters will go over rivets and corrugation or any uneven surface, and there is no tendency to peel or wrinkle.
5. While there is a slight gain in cost over the painted sign, the big gain is in convenience and the fact that the truck or trailer does not have to be taken out for specialty painting.

# You Can't Beat This Trailer

THE  
ALL ALUMINUM  
**Kingham**  
UNIVERSAL



Check these features and you'll know why . . . .

- |   |   |
|---|---|
| ✓ LIGHT WEIGHT<br>ALUMINUM CONSTRUCTION | ✓ HEAVY DUTY<br>DOCK BUMPER                     |
| ✓ EXCEPTIONAL<br>STRENGTH               | ✓ 3 POINT TANDEM<br>SUSPENSION                  |
| ✓ MAXIMUM<br>CUBIC CAPACITY             | ✓ DEPENDABLE PERFORMANCE<br>MINIMUM MAINTENANCE |

for years of trouble - free operation standardize on . . .

**Kingham**  
UNIVERSAL

MODEL \* O.P.A.V.  
\* outside vertical post

**Trailers**

**KINGHAM TRAILER COMPANY, INC., LOUISVILLE 10, KY.**

# 1953 New Truck Registrations by Makes by States\*

| STATE AND MONTH   | Auto-car | Brock-way | Chevrolet | Diamond T | Divco | Dodge | Federal | Ford | FWD | GMC  | International | Ken-worth | Mack | Peter-bilt | Pontiac | Reo | Stude-baker | White | Willis | All Others | Total  |
|-------------------|----------|-----------|-----------|-----------|-------|-------|---------|------|-----|------|---------------|-----------|------|------------|---------|-----|-------------|-------|--------|------------|--------|
| Alabama           | March 4  | 1         | 844       | 3         |       | 166   | 1       | 413  |     | 199  | 129           |           | 23   |            |         | 11  | 51          | 19    | 10     |            | 1,874  |
| March 3 Mos.      | 9        | 1         | 2136      | 7         | 2     | 493   | 7       | 1063 |     | 533  | 331           |           | 50   |            |         | 14  | 136         | 53    | 47     |            | 4,882  |
| Arizona           | March 1  |           | 208       | 1         | 1     | 57    |         | 127  |     | 62   | 68            | 1         | 2    |            |         | 6   | 20          | 2     | 19     |            | 574    |
| March 3 Mos.      |          |           | 530       | 4         | 1     | 152   |         | 353  |     | 186  | 170           | 6         | 18   |            |         | 18  | 59          | 14    | 41     |            | 1,552  |
| Arkansas          | March 1  |           | 682       |           |       | 109   | 1       | 419  |     | 214  | 139           |           |      |            |         | 2   | 45          | 5     | 17     |            | 1,633  |
| March 3 Mos.      |          |           | 2103      | 2         |       | 407   | 2       | 1320 |     | 713  | 415           |           | 1    |            |         | 7   | 163         | 22    | 62     |            | 5,247  |
| California        | March 14 |           | 2266      | 28        | 12    | 821   |         | 1151 | 1   | 682  | 565           | 23        | 21   |            | 10      | 16  | 184         | 29    | 210    | 14         | 6,048  |
| March 3 Mos.      | 38       |           | 6251      | 84        | 51    | 2461  | 2       | 3319 | 4   | 2046 | 1775          | 59        | 52   | 10         | 16      | 62  | 546         | 109   | 565    | 44         | 17,494 |
| Colorado          | March 8  |           | 355       | 21        | 2     | 93    |         | 232  | 3   | 113  | 136           | 1         |      | 6          |         | 7   | 26          | 4     | 39     |            | 1,046  |
| March 3 Mos.      | 13       |           | 1043      | 43        | 6     | 241   | 5       | 698  | 9   | 348  | 372           | 4         |      | 6          |         | 12  | 105         | 7     | 114    |            | 3,034  |
| Connecticut       | March 3  |           | 282       | 9         | 13    | 89    | 4       | 140  |     | 72   | 88            |           | 19   |            |         | 19  | 63          | 70    | 68     | 1          | 1,873  |
| March 3 Mos.      | 5        | 13        | 612       | 18        | 27    | 216   | 13      | 378  |     | 151  | 186           |           | 33   |            |         | 19  | 63          | 70    | 68     | 1          | 1,873  |
| Delaware          | March 1  |           | 99        |           |       | 33    |         | 51   |     | 7    | 22            |           | 2    |            |         | 3   | 4           | 1     | 6      |            | 229    |
| March 3 Mos.      | 1        | 2         | 272       |           |       | 61    | 5       | 132  |     | 39   | 71            |           | 6    |            |         | 6   | 23          | 3     | 9      |            | 630    |
| Dist. of Columbia | March 1  |           | 91        |           | 5     | 19    |         | 45   |     | 50   | 24            |           |      |            | 1       | 4   |             |       | 1      |            | 246    |
| March 3 Mos.      | 3        |           | 207       | 12        | 10    | 52    | 1       | 118  |     | 73   | 46            |           | 7    |            |         | 9   | 3           | 2     | 6      |            | 550    |
| Florida           | March 1  |           | 913       | 7         | 1     | 306   | 2       | 480  |     | 279  | 233           |           | 37   |            | 1       | 10  | 131         | 27    | 95     | 4          | 2,527  |
| March 3 Mos.      | 9        |           | 2250      | 18        | 16    | 727   | 7       | 1380 |     | 619  | 578           |           | 101  |            | 2       | 41  | 322         | 76    | 217    | 9          | 6,372  |
| Georgia           | March 1  |           | 588       | 4         | 4     | 172   |         | 305  |     | 169  | 139           |           | 9    |            |         | 1   | 60          | 9     | 17     | 1          | 1,482  |
| March 3 Mos.      | 3        | 1         | 2054      | 8         | 5     | 579   |         | 1135 |     | 611  | 491           |           | 35   |            | 2       | 10  | 218         | 55    | 47     | 1          | 5,255  |
| Idaho             | March 1  |           | 241       | 3         | 1     | 75    |         | 160  | 1   | 100  | 119           | 5         | 4    |            |         | 2   | 24          | 3     | 51     |            | 787    |
| March 3 Mos.      | 8        |           | 638       | 7         | 1     | 529   |         | 453  | 1   | 281  | 322           | 10        | 24   | 1          |         | 21  | 77          | 7     | 156    | 2          | 2,175  |
| Illinois          | March 8  |           | 1493      | 46        | 9     | 194   |         | 902  |     | 340  | 712           |           | 28   |            | 2       | 21  | 125         | 73    | 54     | 8          | 4,352  |
| March 3 Mos.      | 10       |           | 4200      | 107       | 29    | 1407  | 3       | 2682 | 1   | 879  | 1684          |           | 46   |            | 9       | 30  | 354         | 153   | 207    | 24         | 11,805 |
| Indiana           | March 1  |           | 786       | 7         | 7     | 227   | 2       | 293  | 1   | 207  | 328           |           | 8    |            |         | 9   | 103         | 66    | 29     | 9          | 2,083  |
| March 3 Mos.      | 4        |           | 1864      | 21        | 18    | 643   | 3       | 1172 | 1   | 490  | 876           |           | 28   |            |         | 26  | 271         | 139   | 83     | 11         | 5,650  |
| Iowa              | March 1  |           | 905       | 10        | 2     | 181   | 1       | 540  | 3   | 148  | 453           |           | 9    |            | 2       | 4   | 64          | 21    | 28     | 1          | 2,373  |
| March 3 Mos.      | 1        |           | 1751      | 21        | 4     | 390   | 1       | 1277 | 6   | 332  | 951           | 2         | 16   |            | 3       | 12  | 142         | 61    | 63     | 13         | 5,046  |
| Kansas            | March 1  |           | 672       | 2         | 1     | 127   |         | 350  |     | 188  | 266           |           |      |            |         | 1   | 50          | 5     | 20     |            | 1,683  |
| March 3 Mos.      | 1        |           | 1544      | 6         | 4     | 308   |         | 994  |     | 449  | 612           |           |      |            | 2       | 5   | 121         | 39    | 86     | 2          | 4,173  |
| Kentucky          | March 1  |           | 575       | 3         | 4     | 118   |         | 248  |     | 124  | 161           |           | 12   |            |         | 6   | 41          | 10    | 31     |            | 1,334  |
| March 3 Mos.      | 1        |           | 1834      | 6         | 6     | 378   | 7       | 919  |     | 456  | 500           |           | 19   |            | 2       | 12  | 138         | 28    | 122    |            | 4,428  |
| Louisiana         | March 7  |           | 642       | 1         | 2     | 118   | 1       | 360  |     | 162  | 171           |           | 3    |            | 2       | 1   | 74          | 7     | 23     | 1          | 1,574  |
| March 3 Mos.      | 7        |           | 1940      | 6         | 4     | 446   | 1       | 1203 |     | 523  | 553           |           | 19   |            | 2       | 1   | 222         | 18    | 75     | 1          | 5,021  |
| Maine             | March 1  |           | 112       | 1         | 1     | 27    |         | 70   |     | 37   | 36            |           | 8    |            | 1       | 2   | 14          | 7     | 11     | 1          | 324    |
| March 3 Mos.      | 2        |           | 391       | 4         | 4     | 125   |         | 285  | 1   | 171  | 136           |           | 25   |            | 1       | 6   | 62          | 7     | 51     | 6          | 1,279  |
| Maryland          | March 1  |           | 275       |           | 10    | 149   |         | 126  |     | 73   | 82            |           | 11   |            |         | 3   | 19          | 17    | 5      |            | 775    |
| March 3 Mos.      | 5        | 19        | 804       | 2         | 10    | 388   | 3       | 528  | 1   | 171  | 227           |           | 29   |            |         | 8   | 57          | 43    | 41     | 1          | 2,337  |
| Massachusetts     | March 18 | 9         | 332       | 5         | 15    | 126   | 2       | 217  |     | 67   | 106           |           | 28   |            |         | 5   | 39          | 28    | 17     | 1          | 1,024  |
| March 3 Mos.      | 31       | 27        | 817       | 13        | 24    | 296   | 9       | 489  |     | 181  | 231           |           | 64   |            | 3       | 26  | 91          | 48    | 90     | 4          | 2,446  |
| Michigan          | March 2  |           | 1323      | 16        | 21    | 400   | 6       | 577  | 1   | 354  | 249           |           | 9    |            | 5       | 22  | 55          | 36    | 29     | 1          | 3,106  |
| March 3 Mos.      | 6        |           | 3674      | 43        | 53    | 1297  | 64      | 2212 | 1   | 868  | 695           |           | 24   |            | 1       | 5   | 67          | 158   | 73     | 11         | 9,347  |
| Minnesota         | March 1  |           | 670       | 10        | 1     | 165   | 1       | 363  | 3   | 99   | 247           |           | 1    |            | 1       | 10  | 51          | 4     | 31     |            | 1,657  |
| March 3 Mos.      | 3        |           | 1580      | 15        | 5     | 406   | 2       | 1127 | 9   | 282  | 655           |           | 1    |            | 4       | 18  | 124         | 95    | 85     | 1          | 4,345  |
| Mississippi       | March 1  |           | 618       |           |       | 105   |         | 324  |     | 184  | 137           |           |      |            |         | 1   | 38          | 5     | 15     |            | 1,427  |
| March 3 Mos.      | 3        |           | 1773      | 1         |       | 333   |         | 1046 |     | 505  | 449           |           |      |            | 1       | 1   | 146         | 10    | 45     |            | 4,414  |
| Missouri          | March 2  |           | 761       | 1         | 1     | 194   |         | 498  |     | 221  | 219           |           | 3    |            | 1       | 0   | 67          | 39    | 18     | 1          | 2,034  |
| March 3 Mos.      | 2        |           | 1831      | 6         | 5     | 464   |         | 1121 |     | 550  | 429           |           | 11   |            | 1       | 15  | 138         | 60    | 50     | 1          | 4,664  |
| Montana           | March 1  |           | 267       |           |       | 54    |         | 140  |     | 56   | 117           |           |      |            |         |     | 4           | 4     | 4      |            | 746    |
| March 3 Mos.      | 3        |           | 561       | 1         |       | 120   |         | 451  | 2   | 144  | 282           |           | 10   |            | 6       | 68  | 11          | 128   | 6      | 2          | 1,797  |
| Nebraska          | March 6  |           | 480       | 5         |       | 65    |         | 275  |     | 122  | 242           |           | 4    |            |         | 4   | 41          | 5     | 50     | 5          | 1,306  |
| March 3 Mos.      | 7        |           | 1280      | 28        | 2     | 262   |         | 862  | 3   | 311  | 642           |           | 7    |            | 3       | 2   | 105         | 30    | 137    | 9          | 3,638  |
| Nevada            | March 1  |           | 81        |           |       | 20    |         | 51   |     | 74   | 42            |           | 1    |            |         |     | 31          | 2     | 10     |            | 236    |
| March 3 Mos.      | 3        |           | 177       |           |       | 77    |         | 113  |     | 74   | 42            |           | 1    |            |         |     | 31          | 2     | 10     |            | 236    |
| New Hampshire     | March 1  | 2         | 71        |           |       | 24    |         | 36   |     | 10   | 22            |           | 13   |            |         | 2   | 6           | 2     | 7      |            | 195    |
| March 3 Mos.      | 1        | 4         | 203       |           |       | 53    |         | 120  |     | 44   | 54            |           | 20   |            |         | 1   | 22          | 5     | 39     |            | 572    |
| New Jersey        | March 9  | 20        | 979       | 8         | 15    | 237   | 10      | 483  | 1   | 263  | 268           |           | 48   |            | 3       | 10  | 49          | 87    | 42     | 1          | 2,533  |
| March 3 Mos.      | 24       | 64        | 1911      | 16        | 41    | 551   | 22      | 1380 | 4   | 536  | 526           |           | 85   |            | 4       | 21  | 117         | 186   | 86     | 3          | 5,577  |
| New Mexico        | March 1  |           | 126       |           |       | 73    |         | 202  |     | 91   | 79            |           |      |            |         |     | 18          | 2     | 9      | 1          | 307    |
| March 3 Mos.      | 3        |           | 330       |           |       | 73    |         | 202  |     | 91   | 79            |           |      |            |         |     | 18          | 2     | 9      | 1          | 307    |
| New York          | March 22 | 57        | 1419      | 29        | 5     | 513   | 3       | 666  |     | 365  | 469           |           | 91   |            | 1       | 35  | 76          | 70    | 91     | 24         | 3,938  |
| March 3 Mos.      | 44       | 211       | 3547      | 58        | 25    | 1628  | 17      | 2186 | 8   | 940  | 1194          |           | 214  |            | 11      | 109 | 225         | 186   | 272    | 47         | 10,922 |
| North Carolina    | March 1  |           | 927       | 3         | 7     | 199   | 1       | 403  |     | 243  | 195           |           | 76   |            | 2       | 1   | 92          | 27    | 42     | 2          | 2,181  |
| March 3 Mos.      | 8        |           | 2423      | 8         | 13    | 577   | 1       | 1435 | 1   | 662  | 657           |           | 35   |            | 5       | 6   | 244         | 120   | 110    | 5          | 6,350  |
| North Dakota      | March 1  |           | 145       |           |       | 38    |         | 129  |     | 35   | 106           |           |      |            |         |     | 13          | 1     | 7      |            | 477    |
| March 3 Mos.      | 1        |           | 402       |           |       | 115   |         | 462  |     | 96   | 327           |           | 5    |            |         | 1   | 44          | 4     | 22     |            | 1,479  |
| Ohio              | March 14 | 2         | 1554      | 16        | 24    | 651   | 20      | 648  | 1   | 307  | 618           |           | 28   |            | 1       | 40  | 114         | 155   | 60     | 5          | 4,256  |
| March 3 Mos.      | 39       | 3         | 3545      | 39        | 47    | 1458  | 39      | 2198 | 5   | 751  | 1382          |           | 73   |            | 5       | 83  | 267         | 308   | 177    | 7          | 10,406 |
| Oklahoma          | March 2  |           | 504       |           |       | 82    |         | 203  |     | 119  | 141           |           | 3    |            |         |     | 4           | 33    | 10     |            | 1,110  |
| March 3 Mos.      | 3        |           | 2189      |           |       | 8     |         | 1381 | 10  | 580  | 618           | 2         | 11   |            |         | 14  | 167         | 60    | 55     |            | 5,517  |
| Oregon            | March 3  |           | 373       |           |       | 127   | 1       | 237  |     | 120  | 192           | 10        | 8    |            | 3       | 10  | 28          | 15    | 82     | 3          | 1,218  |
| March 3 Mos.      | 8        |           | 958       | 22        | 4     | 306   | 1       | 781  | 2   | 330  | 413           | 30        | 17   | 15         | 2       | 13  | 82          | 33    | 225    | 5          | 3,277  |
| Pennsylvania      | March 15 | 79        | 1431      | 16        | 15    | 600   | 5       | 678  |     | 324  | 641           |           | 87   |            | 35      | 104 | 98          | 63    | 1      |            | 4,192  |
| March 3 Mos.      | 46       | 151       | 3292      | 40        | 37    | 1408  | 19      | 2098 |     | 750  | 1323          |           | 167  |            | 1       | 71  | 226         | 199   | 282    | 5          | 10,115 |
| Rhode Island      | March 1  |           | 63        |           |       | 17    |         | 30   |     | 7    | 15            |           |      |            |         | 1   | 6           | 1     | 5      |            | 148    |
| March 3 Mos.      | 8        | 1         | 176       | 7         | 4     | 75    |         | 125  | 4   | 38   | 52            |           | 9    |            |         | 8   | 14          | 7     | 11     |            | 539    |
| South Carolina    | March 1  |           | 459       |           |       | 68    |         | 232  |     | 96   | 64            |           |      |            |         |     | 32          | 9     | 6      | 1          | 969    |
| March 3 Mos.      | 3        |           | 1355      | 2         | 1     | 277   |         | 746  |     | 303  | 236           |           | 7    |            | 1       | 100 | 23          | 29    | 3      |            | 3,083  |
| South Dakota      | March 1  |           | 152       |           |       | 38    |         | 89   |     | 34   | 113           |           |      |            |         | 1   | 11          | 2     | 23     |            | 464    |
| March 3 Mos.      | 3        |           | 450       | 3         | 1     | 130   | 1       | 346  |     | 118  | 325           | 1         |      |            | 3       | 1   | 60          | 8     | 82     |            | 1,529  |
| Tennessee         | March 1  |           | 885       | 2         | 4     | 237   |         | 392  |     | 226  | 220           |           | 14   |            |         | 1   | 60          | 11    | 26     |            | 2,084  |
| March 3 Mos.      | 6        |           | 2221      | 8         | 5     | 608   | 16      | 1217 |     | 560  | 552           |           | 26   |            | 1       | 13  | 137         | 32    | 59     |            | 5,459  |
| Texas             | March 14 |           | 2838      | 11        | 1     | 461   | 1       | 1288 |     |      |               |           |      |            |         |     |             |       |        |            |        |



# CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED EACH MONTH BY MANUFACTURERS

## KEY TO DEFINITIONS

### MAKE AND MODEL

Only Domestic Truck Models are listed.

### OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

### CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

### RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are

those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

### CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the

weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

### STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

### MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

### MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

### MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

### MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

### GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

### TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

## KEY TO ABBREVIATIONS

### MAKES—ALL

B—Bendix.  
BL—Brown-Ship.  
Bu or Bud—Buda.  
BW—Bendix-Westinghouse.  
C—Chevrolet.  
Cl or Cla—Clark.  
Con—Continental.  
Cum—Cummins-Diesel.  
Ea—Eaton.  
F—Ford.  
Fu—Fuller.  
G-H—Goodyear-Hawley type.  
H—Hotchkiss.  
Her—Hercules.  
HS—Hall-Scott.  
Int—International Harvester.  
L—Lockheed.  
LeR—LeRoi.  
LH—Lockheed front, Wagner "hi-Tork" rear.  
LT—Lockheed type front Timken rear.  
LW—Lockheed front, Wisconsin rear.  
M—Midland.  
N.P.—New Process.  
O or Ow—Own.  
Op or Opt—Optional.  
Shu—Shuler.  
Spi—Steeler.  
T or Tim—Timken-Detroit Axle Co.

Tv—Timken-Detroit—Westinghouse.  
TW—Timken-Detroit—Wisconsin.  
Var—Variable.  
WG—Warner Gear.  
Wau—Waukesha.  
W or Wis—Wisconsin.  
Wg—Wagner "hi-Tork."  
Ww—Westinghouse.  
WW—Westinghouse or Wagner.

### WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.  
2R—Rear Unit of Rear Axle Group.  
4R—Forward and rear units of Rear Axle Group.  
6—All wheels.

### BRAKES—SERVICE

Location  
4—Four Wheels, front and rear.  
4r—Four Wheels, rear only.

### Type

I—Internal.  
X—External.  
Operation  
A—Air.  
H—Hydraulic.

V—Vacuum.  
D or Dp—Dual Primary.

### BRAKES—HAND

Location  
C—Center of double propeller shaft.  
2—Rear wheels.  
4—Four wheels.  
6—Six wheels.  
P—Back of Power Divider.  
J—Jackshaft.  
T—Transmission.  
F—Driveshaft.

### Type

D—Tru-Stop disk.  
I—Internal.  
M—Mechanical.  
X—External.  
PD—Two drums on rear of power divider.  
F—Mechanical, foot operated.

### BRAKE DRUMS

Material  
a—Cast alloy iron.  
A—American Car Foundry.  
c—Cast iron.  
Cc—Composite Front, Cast Iron in rear.

Ce—Centrifuge.  
Cl—Copper iron.  
Co—Composite.  
D—Dayton.  
E—Ermalite.  
G—Gunite.  
N—Nickel iron.  
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

### FRAME

Type  
C—Channel.  
T—Channel tapered front and rear.  
L—Channel reinforced with liner.  
B—Channel reinforced with both liner and fishplate.  
P—Channel reinforced with plate.  
TL—Channel tapered front and rear reinforced with liner.  
D—Drop Center.  
Tf—Tapered front.  
A—Straight section sldemembers, lined with oak inserts.

Z—Reinforced (X) member frame, box type sections.

### REAR AXLE

Final Drive and Type  
R—Revel.  
CD—Chain Drive.  
F—Full-floating.  
H or Hy—Hypoid.  
d—Dual range axle.  
2—Double Reduction.  
S—Spiral bevel.  
W—Worm.  
3/4—Three Quarters Floating.  
1/2—Semi-Floating.  
T—Torque Tube.

### GEAR RATIOS

(\*) Only one ratio.  
Drive and Torque  
H—Hotchkiss (springs).  
R—Radius Rods.  
L—Parallel Torque Rods.  
T—Torque Arm.

### GOVERNOR STANDARD

Y—Yes.  
N—No.

## KEY TO REFERENCES

c.f.—Cab Forward design.

c.o.e.—Cab-Over-Engine design.

(D)—Diesel-engine equipped.

(T)—Designed for tractor use only.

(C)—Ford or Chevrolet Models.

(R)—Remanufactured Fords.

\*—Denotes "Includes Cab" when used with weights or prices.

### BROWN

\*—All six engines listed are available on all five models of trucks.

\*—Steel frame only. Also available with Aluminum frame 10x3 1/2 x 1 1/2.

\*—Many variations available with Fuller or Spicer transmissions.

\*—2.291

\*—1.866

\*—4.508

\*—3.359

\*—79.672

\*—63.364

\*—220.894

\*—182.310

\*—1.087

\*—1.087

\*—1.087

\*—1.087

\*—1.087

\*—1.087

\*—1.087

\*—1.087

\*—1.087

2.7478; Rear, 2.7788. Total Length 5 ft.

4 speed transmission available.

Also available in 5.14 ratio.

5.43 available.

Two speed axle available.

8 1/2 x 2 1/4 x 1 1/4 is used with heavy-duty equipment.

### CORBITT

\*—Available with optional tires and axles for less G.V.W. rating.

\*—Also available with Cummins HRB600 and NHB-600.

### DODGE

\*—Front only: Rear 7.00/168.

\*—Front only: Rear 8.25/168.

\*—Front only: Rear 7.50/20.

\*—Front only: Rear 9.00/20.

\*—Front only: Rear 10.00/20.

\*—Rear of transfer case.

\*—Truck - O - Matic transmission available.

\*—Twin carburetion.

\*—Two speed rear axle available.

### DUPLEX

\*—Torque Divider, Timken T70-2 speed.

### FEDERAL

\*—Diesel engine obtainable.

\*—Five speed transmission obtainable.

\*—Auxiliary transmission

Spicer 6231B with 3 forward speeds.

Auxiliary transmission Spicer 8031.

5501, 6001 and 6501 have single speed, double reduction rear axle.

Radius rods obtainable.

For wheelbases below 196" — 9 x 3 x 1 1/4.

For shorter wheelbases, 10 x 3 1/2 x 1 1/4.

Diesel engine obtainable.

Overdrive optional.

Torque Divider Timken T70-2 speed, T50 obtainable.

SW3020, 8D3020 obtainable.

SW3020 obtainable.

Rear only.

With R series rear axle, reduce G.V.W. by 4000 lbs.

With R series rear axle, reduce G.V.W. by 4000 lbs.

With R series rear axle, reduce G.V.W. by 4000 lbs.

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With R series rear axle, reduce G.V.W. by 4000 lbs.

\*—Other Cummins 6 cylinder engines optional.

\*—Includes cab and dual tires on front, center and rear axles.

\*—Dependent upon engine.

\*—Dependent upon engine.

\*—Dependent upon engine.

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\*—Dependent upon engine.

\*—Dependent upon engine.

\*—Dependent upon engine.

\*—Dependent upon engine.

\*—Parking brake at rear of transfer case.

\*—Tapered, 9 x 7 x 3 1/4 x 1 1/4.

\*—Also available with Cummins Diesel engine and appropriate transmission.

\*—Also available with Cummins Diesel engine and appropriate transmission.

\*—Also available with Cummins Diesel engine and appropriate transmission.

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\*—Also available with Cummins Diesel engine and appropriate transmission.

| Line Number | MAKE AND MODEL | Chassis List Price | WHEEL-BASE       |                  | Gross Vehicle Weight for Normal Service | TIRE SIZES | ENGINE DETAILS          |                       |                |                                  | TRANSMISSION |             | REAR AXLE      |                           | FRONT AXLE | BRAKES                     |                   |                |                | FRAME  |                |                |                |             |                |          |                |             |           |               |                                  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|             |                |                    | Minimum Standard | Maximum Standard |   |            | Standard Front and Rear | Dual rear Single rear | Make and Model | No. of Cylinders Bore and Stroke | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. |            | Main Bearings and Diameter | Governor Standard | Make and Model | Forward Speeds |        | Make and Model | Clear and Type | Drive & Torque | Clear Ratio | Make and Model | Location | Operation Type | Lining Area | Drum Area | Hand Location | C-A Dimensions (Min. Std. W. B.) | Type |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1           | Available      | 200                |                  |                  | 15000                                   | 8.25/20    | Wau BM                  | 6-3/4x6               | 263.5          | 9.178                            | 78-2800      | 78-2800     | 78-2800        | 2-3/4x10                  | WG T9      | 4-Tim L1000DPH             | HF                | H              | 6.3-8.1        | 22502H | L4HV           | 314            | 534a           | 314         | 534a           | 10x3x4   | T              |             |           |               |                                  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# up to 30% extra tire mileage with these wide base rims

TIRES WEAR FASTER ON NARROW RIMS



WIDE BASE RIMS LENGTHEN TIRE LIFE



THE surest way to cut tire cost today is to change over to Wide Base Rims. That isn't a promise—it's a fact, proved by experienced operators who report up to 30% increase in mileage, depending on operating conditions, after changing to Goodyear 70 Series Wide Base Rims.

70 Series Rims are interchangeable with all demountable rims having the standard mounting bevel, eliminating need for costly wheel changes. They provide all the advantages of wide base tapered bead seat rims—greater tire volume, cooler running temperatures, fewer blowouts,

more and better tires for recaps, fewer road delays.

To get the marked increase in mileage that results from these advantages, it will pay you to investigate Goodyear 70 Series Wide Base Rims today. Uniform in design through the entire size range, there's a rim for every tire size. Safe, strong, lighter in weight, these rims help explain why more tons are hauled on Goodyear Truck Rims than on any other kind. See your rim supplier or write Goodyear, Metal Products Division, Akron 16, Ohio.

# GOODYEAR

## WIDE BASE RIMS

We think you'll like THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

COMMERCIAL CAR JOURNAL, June, 1953

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[illegible]

For Key to References and Abbreviations See Page 101

| For Key to References and Abbreviations See Back |    |     |     |       |              |      |    |     |                  |       |          |              |     |       |      |        |     |      |     |     |    |          |   |
|--|----|-----|-----|-------|--------------|------|----|-----|------------------|-------|----------|--------------|-----|-------|------|--------|-----|------|-----|-----|----|----------|---|
| (Turn to Page 106, Please)                       |    |     |     |       |              |      |    |     |                  |       |          |              |     |       |      |        |     |      |     |     |    |          |   |
| 72   | 38 | 132 | 192 | 19500 | 61258.25/20D | 9.60 | 20 | Own | 8-3 5/8x3.4254-6 | 8.217 | 112-3500 | 4-2 5/8x13.8 | Own | 4 Own | HF H | ** 7.2 | Own | O4IH | 444 | 697 | 60 | 9x3x 1/4 | C |
| 72   | 38 | 132 | 192 | 19500 | 61258.25/20D | 9.60 | 20 | Own | 8-3 5/8x3.4254-6 | 8.217 | 112-3500 | 4-2 5/8x13.8 | Own | 4 Own | HF H | ** 7.2 | Own | O4IH | 444 | 697 | 60 | 9x3x 1/4 | C |
| 72   | 38 | 132 | 192 | 19500 | 61258.25/20D | 9.60 | 20 | Own | 8-3 5/8x3.4254-6 | 8.217 | 112-3500 | 4-2 5/8x13.8 | Own | 4 Own | HF H | ** 7.2 | Own | O4IH | 444 | 697 | 60 | 9x3x 1/4 | C |

This new 15 hp Westinghouse "Y" is large enough to handle all your needs. And there's a complete range of smaller sizes down to 1½ hp. They give you the high pressure needed for jobs requiring high pressure, and, with the addition of a Westinghouse Reducing Valve, fixed low pressure for jobs like paint spraying or body polishing.

## 105



| Line Number | MAKE AND MODEL   | Chassis List Price | WHEEL-BASE |           | Gross Vehicle Weight for Normal Service | Chassis Weight (See definition) | TIRE SIZES    |                       | ENGINE DETAILS   |           |              |             | TRANSMISSION   |                           | REAR AXLE     |                   | FRONT AXLE | BRAKES |                       |     |      | FRAME |                         |
|-------------|------------------|--------------------|------------|-----------|---|---------------------------------|---------------|-----------------------|------------------|-----------|--------------|-------------|----------------|---------------------------|---------------|-------------------|------------|--------|-----------------------|-----|------|-------|-------------------------|
|             |                  |                    | Minimum    | Maximum   |   |                                 | Standard Rear | Automated (Dual size) | No. of Cylinders | Stroke    | Displacement | Comp. Ratio | Torque lb. ft. | Max. Brake H.P. at R.P.M. | Main Bearings | Governor Standard |            |        |                       |     |      |       |                         |
| 1           | Ford-Cont'd      |                    |            |           |   |                                 |               |                       |                  |           |              |             |                |                           |               |                   |            |        |                       |     |      |       |                         |
| 2           | F-300 Cab        | 6525.90            | 10.00/20   | 10.00/20  | 22000                                   | 6525.90                         | 10.00/20      | 10.00/20              | 8-3              | 8.3x3 1/2 | 317.7        | 1284        | 155-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | SF     | H7 17-7 67Ow          | 485 | 729  | 60    | 9x3 1/4 C               |
| 3           | F-300 Cab        | 6975.10            | 10.00/20   | 11.00/20  | 27000                                   | 6975.10                         | 10.00/20      | 11.00/20              | 8-3              | 8.3x3 1/2 | 317.7        | 1284        | 155-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | SF     | H7 17-7 67Ow          | 542 | 829  | 60    | 9x3 1/4 C               |
| 4           | C-500 C.O.E.     | 4600.60            | 7.50/20    | 7.50/20   | 14000                                   | 4600.60                         | 7.50/20       | 7.50/20               | 8-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 323 | 494  | 60    | 8 3/2 8 1/4 C           |
| 5           | C-600 C.O.E.     | 4940.70            | 7.50/20    | 8.25/20   | 16000                                   | 4940.70                         | 7.50/20       | 8.25/20               | 8-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 386 | 562  | 60    | 8 3/2 8 1/4 C           |
| 6           | C-750 C.O.E.     | 6235.85            | 7.50/20    | 9.00/20   | 19500                                   | 6235.85                         | 7.50/20       | 9.00/20               | 8-3              | 1.3x3 1/2 | 279.7        | 1244        | 145-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | HF     | H 7-2 Owa             | 444 | 697  | 66    | 9x3 1/4 C               |
| 7           | C-850 C.O.E.     | 6615.90            | 7.50/20    | 10.00/20  | 23000                                   | 6615.90                         | 7.50/20       | 10.00/20              | 8-3              | 1.3x3 1/2 | 317.7        | 1284        | 155-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | SF     | H7 17-7 67Ow          | 485 | 729  | 66    | 9x3 1/4 C               |
| 8           | P-350 Parol Div. | 3100.70            | 10.00/18   | 7.50/17.8 | 7800                                    | 3100.70                         | 10.00/18      | 7.50/17.8             | 6-3              | 5x3       | 621.57       | 0185        | 101-3500       | 4-2 1/2x12.7              | Own           |                   | 3Own       | HF     | H 7-2 Owa             | 196 | 302  | 82    | 6-2 1/2 x 19 C          |
| 9           | P-500 Parol Div. | 4205.70            | 10.00/18   | 7.50/20   | 14000                                   | 4205.70                         | 10.00/18      | 7.50/20               | 6-3              | 5x3       | 621.57       | 0185        | 101-3500       | 4-2 1/2x12.7              | Own           |                   | 3Own       | HF     | H6 2-6 8 Owa          | 323 | 494  | 108   | 8 3/2 8 1/4 C           |
| 10          | B-500 School Bus | 4170.60            | 7.50/20    | 7.00/20   | 12000                                   | 4170.60                         | 7.50/20       | 7.00/20               | 8-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 323 | 494  | 128   | 8 3/2 8 1/4 C           |
| 11          | B-600 School Bus | 4170.60            | 7.50/20    | 7.00/20   | 12000                                   | 4170.60                         | 7.50/20       | 7.00/20               | 8-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 323 | 494  | 128   | 8 3/2 8 1/4 C           |
| 12          | B-700 School Bus | 4630.70            | 7.50/20    | 8.25/20   | 16000                                   | 4630.70                         | 7.50/20       | 8.25/20               | 6-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 366 | 562  | 166   | 8 3/2 8 1/4 C           |
| 13          | B-700 School Bus | 4630.70            | 7.50/20    | 8.25/20   | 16000                                   | 4630.70                         | 7.50/20       | 8.25/20               | 6-3              | 1.3x3 1/2 | 239.6        | 8194        | 106-3500       | 3-2 1/2x12.4              | Own           |                   | 4Own       | HF     | H6 2-6 8 Owa          | 366 | 562  | 166   | 8 3/2 8 1/4 C           |
| 14          | B-700 School Bus | 5540.70            | 7.50/20    | 9.00/20   | 19500                                   | 5540.70                         | 7.50/20       | 9.00/20               | 6-3              | 1.3x3 1/2 | 279.7        | 1244        | 145-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | HF     | H 7-2 Owa             | 444 | 697  | 205   | 9x3 1/4 C               |
| 15          | B-700 School Bus | 6145.85            | 7.50/20    | 9.00/20   | 23000                                   | 6145.85                         | 7.50/20       | 9.00/20               | 6-3              | 1.3x3 1/2 | 279.7        | 1244        | 145-3900       | 5-2 1/2x15.0              | Own           |                   | 5Own       | HF     | H 7-2 Owa             | 444 | 697  | 205   | 9x3 1/4 C               |
| 16          | Kenworth(D) 521  | 12500.10           | 10.00/20   | 11.00/22  | 28000                                   | 12500.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 17          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 18          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 19          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 20          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 21          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 22          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 23          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 24          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 25          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 26          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 27          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 28          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 29          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 30          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 31          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 32          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 33          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 34          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 35          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 36          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 37          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 38          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 39          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 40          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 41          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 42          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 43          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2 x 1 1/2 x 1 1/2 C |
| 44          | Kenworth(D) 521  | 24800.10           | 10.00/20   | 11.00/22  | 28000                                   | 24800.10                        | 10.00/20      | 11.00/22              | 6-5              | 1.3x3 1/2 | 743.16       | 540         | 165-3900       | 7-4 1/2x15.0              | Own           |                   | 4Own       | U300P  | H5 91-9 76Tm F9000DPA | 722 | 1174 | 67    | 9 1/2                   |



|    |                |     |      |       |          |       |    |     |          |      |       |      |      |              |    |     |     |       |           |              |    |    |      |       |          |        |
|----|----------------|-----|------|-------|----------|-------|----|-----|----------|------|-------|------|------|--------------|----|-----|-----|-------|-----------|--------------|----|----|------|-------|----------|--------|
| 64 | Sterling       | 251 | 2514 | 21000 | 66158.25 | 20.00 | 20 | Own | 2924     | 6-3% | 24%   | 2926 | 5224 | 124-33007    | -2 | 19  | 408 | Y Cln | 231F      | 4 TIm H-100  | HF | H6 | 8-7  | 2 TIm | 32500    | L74IVH |
| 65 | (T) TB130IT    | 143 | 153  | 26000 | 10375.10 | 11.00 | 22 | Wau | 140CKB** | 6-4% | 4.55% | 5256 | 4425 | 127-27007    | -3 | x15 | 15  | YFu   | 5A620     | 5 TIm R100P  | 2F | R3 | 70-7 | 40T   | F900DDPA | W44IA  |
| 66 | (T) TB130IT    | 143 | 153  | 30000 | 11000.00 | 12.00 | 24 | Wau | 140CZB*  | 6-4% | 4.55% | 5556 | 4425 | 183-26007    | -3 | x15 | 15  | YFu   | 5A620     | 5 TIm U200P  | 2F | R5 | 91-9 | 76T   | F900DDPA | W44IA  |
| 67 | (D)(T)TA150ITD | 173 | 181  | 30000 | 3125.10  | 10.00 | 22 | Cum | NHB600   | 6-5% | 5.6%  | 743  | 15   | 537200-21007 | -4 | x13 | 13  | YFu   | A486-3B65 | 12 TIm S200P | 2F | R5 | 91-9 | 76T   | F900DDP  | W44IA  |



|    |                |     |      |       |          |       |    |              |                    |      |      |              |      |     |               |              |     |         |              |        |     |       |      |     |   |     |      |
|----|----------------|-----|------|-------|----------|-------|----|--------------|--------------------|------|------|--------------|------|-----|---------------|--------------|-----|---------|--------------|--------|-----|-------|------|-----|---|-----|------|
| 64 | Sterling       | 251 | 2514 | 21000 | 66158.25 | 20.00 | 20 | Own 292d     | 6-3% <sup>24</sup> | 2926 | 5224 | 124-33007    | -219 | 408 | Y Cln 231F    | 4 TIm H-100  | HF  | H6 8-7  | TIm 32500    | Lt4IVH | 429 | 748   | WMTX | 224 | 9 | 433 | NHTK |
| 65 | (T) TB130IT    | 143 | 153  | 26000 | 10375.10 | 11.00 | 22 | Wau 140CKB** | 6-4% <sup>25</sup> | 5256 | 4420 | 127-27007    | -3   | x15 | YFU 5A620     | 5 TIm R100P  | 2FV | R3 70-7 | 40T F900DDPA | W44IA  | 560 | 930e  | TX   | 67  | A | †   | †    |
| 66 | (T) TB130IT    | 143 | 153  | 30000 | 11000.00 | 12.00 | 24 | Wau 140CZB*  | 6-4% <sup>25</sup> | 5556 | 4450 | 183-26007    | -3   | x15 | YFU 5A620     | 5 TIm U200P  | 2FV | R5 91-9 | 76T F900DDPA | W44IA  | 622 | 1031a | TX   | 67  | A | †   | †    |
| 67 | (D)(T)TA180ITD | 173 | 181  | 30000 | 3125.10  | 10.00 | 22 | Cum NHB600   | 6-5% <sup>26</sup> | 743  | 15   | 537200-21007 | -4   | x13 | YFU A48G-3B65 | 12 TIm S200P | 2F  | R5 91-9 | 76T F900DDP  | W44IA  | 622 | 1031a | TX   | 77  | A | †   | †    |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5%±6   | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

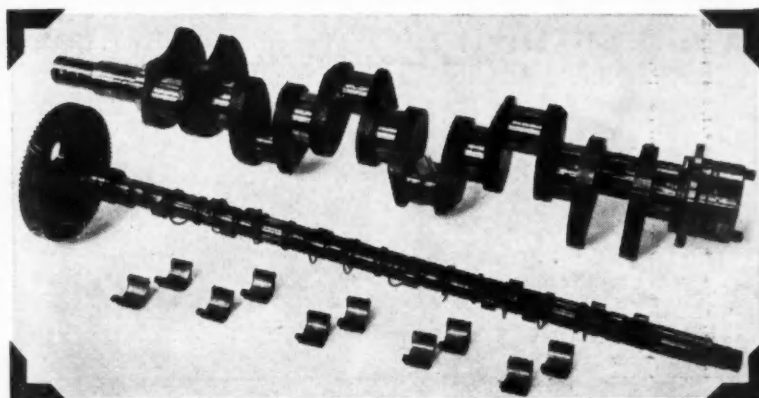
|    |                  |     |      |       |                |          |              |          |       |                |          |                |              |    |             |           |        |     |      |      |     |     |      |   |
|----|------------------|-----|------|-------|----------------|----------|--------------|----------|-------|----------------|----------|----------------|--------------|----|-------------|-----------|--------|-----|------|------|-----|-----|------|---|
| 64 | Sealing          | 251 | 2514 | 21000 | 66158.25.20    | 10.00.20 | Own 2924     | 6-3%±4%  | 2926  | 5224.124-33007 | 2.19.408 | Y Cln 231F     | 4 TIm H-100  | HF | H6 8-7.2    | TIm 32500 | L741VH | 429 | 748  | WMTX | 224 | 943 | WMTX | 4 |
| 65 | *** (T) TB1301T  | 143 | 153  | 26000 | 10375.11.00.20 | 11.00.22 | Wau 140CKB** | 6-4.1±5% | 5256  | 4425.127-27007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 560 | 930  | TX   | 67  | 4   | 4    | 4 |
| 66 | *** (T) TB1301T  | 143 | 153  | 30000 | 11100.11.00.20 | 12.00.24 | Wau 140CKB** | 6-4.1±5% | 5556  | 4425.183-26007 | 3.15.15  | Y Fy 5A620     | 5 TIm R100P  | 2F | R3 70-7.40T | F9000DPA  | W44A   | 622 | 1034 | TX   | 67  | 4   | 4    | 4 |
| 67 | (D) (T) TA1501TD | 173 | 181  | 30000 | 3125.10.00.20  | 10.00.22 | Cum NHB600   | 6-5.6±6  | 743.5 | 537.200-21007  | 4.3x13 H | Y Fy A486-3B65 | 12 TIm S200P | 2F | R5 91-9.76T | F9000DP   | W44A   | 622 | 1034 | TX   | 77  | 4   | 4    | 4 |

| Line Number | MAKE AND MODEL     | Chassis List Price | WHEEL-BASE |         | TIRE SIZES | ENGINE DETAILS   |              |             |                | TRANSMISSION              |                                 | REAR AXLE         |                | FRONT AXLE   | BRAKES       |               |           |           | FRAME         |                                  |                      |                        |    |
|-------------|--------------------|--------------------|------------|---------|------------|------------------|--------------|-------------|----------------|---------------------------|---------------------------------|-------------------|----------------|--------------|--------------|---------------|-----------|-----------|---------------|----------------------------------|----------------------|------------------------|----|
|             |                    |                    | Minimum    | Maximum |            | No. of Cylinders | Displacement | Comp. Ratio | Torque lb. ft. | M.S. Brake H.P. at R.P.M. | Main Bearings Number and Length | Governor Standard | Make and Model |              | Location     | Limiting Area | Drum Area | Material  | Hand Location | C-A Dimensions (Min. Std. W. B.) | Side Rail Dimensions | Type                   |    |
| 1           | Sterling-Cont'd    |                    |            |         |            |                  |              |             |                |                           |                                 |                   |                |              |              |               |           |           |               |                                  |                      |                        |    |
| 2           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 3           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 4           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 5           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 6           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 7           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 8           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 9           | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 10          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 11          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 12          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 13          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 14          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 15          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 16          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 17          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 18          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 19          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 20          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 21          | Studebaker         | 112                | 112        | 112     | 6.50/16S   | 6-3.5x4          | 1707         | 10.38       | 85-4000        | 4-2x5                     | N/Own 680233                    | N/Own 680233      | N/Own 680233   | N/Own 680233 | N/Own 680233 | W-41H         | 170 276   | 170 276   | CO            | CO                               | 40                   | 7x3 1/2 x 1 1/2        | T  |
| 22          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 23          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 24          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 25          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 26          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 27          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 28          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 29          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 30          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 31          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 32          | Ward La Fr.        | 149                | 220        | 2500    | 11.00/20   | 6-5.5x6          | 4275         | 1340        | 152-2600       | 7-2x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 33          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 34          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 35          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 36          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 37          | White-Freightliner | 114                | 120        | 4000    | 10.00/22   | 6-5.5x6          | 743.13       | 572.200     | 2100           | 7-4x16 1/2                | Y-Fu 4A86                       | Y-Fu 4A86         | Y-Fu 4A86      | Y-Fu 4A86    | Y-Fu 4A86    | O-41H         | 645 1050a | 645 1050a | TD            | TD                               | 72                   | 10 1/2 x 3 1/2 x 1 1/2 | DL |
| 38          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 39          | Willys 84. Dv. 475 | 149                | 220        | 2500    | 11.00/20   | 6-5.5x6          | 4275         | 1340        | 152-2600       | 7-2x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 40          | Four-Wheel-Drive   | 114                | 120        | 4000    | 10.00/22   | 6-5.5x6          | 743.13       | 572.200     | 2100           | 7-4x16 1/2                | Y-Fu 4A86                       | Y-Fu 4A86         | Y-Fu 4A86      | Y-Fu 4A86    | Y-Fu 4A86    | O-41H         | 645 1050a | 645 1050a | TD            | TD                               | 72                   | 10 1/2 x 3 1/2 x 1 1/2 | DL |
| 41          | Coleman            | 136                | 150        | 30000   | 11.00/20   | 6-4 1/2 x 5 1/2  | 525.6        | 7.000       | 150-2200       | 7-3x7 1/2                 | Y-Fu 5A650                      | Y-Fu 5A650        | Y-Fu 5A650     | Y-Fu 5A650   | Y-Fu 5A650   | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 96                   | 9x3 1/2 x 1 1/2        | C  |
| 42          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 43          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 44          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 45          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 46          | (D) T-150          | 173                | 173        | 173     | 11.00/20   | 6-5.5x6          | 7.315        | 13.200      | 2100           | 4-1x13                    | Y-Fu 5A33                       | Y-Fu 5A33         | Y-Fu 5A33      | Y-Fu 5A33    | Y-Fu 5A33    | W-41H         | 622 1034a | 622 1034a | TX            | TX                               | 77                   | 9x3 1/2 x 1 1/2        | A  |
| 47          | (D) T-150          | 173                | 173        |         |            |                  |              |             |                |                           |                                 |                   |                |              |              |               |           |           |               |                                  |                      |                        |    |

# THE ENGINEER'S REPORT

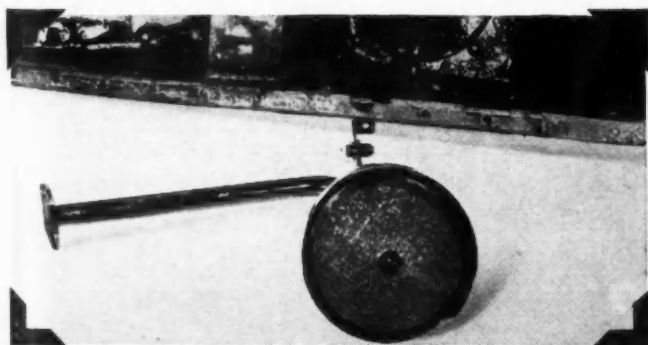
|           |   |
|-----------|---|
| DATA      |   |
| LUBRICANT | RPM Delo Oils                             |
| UNIT      | 6-71 GMC diesel                           |
| SERVICE   | Mainline bus service                      |
| PERIOD    | 1 Year                                    |
| FIRM      | Pacific Greyhound Lines,<br>San Francisco |

## Only 0.003 inch liner wear in 200,275 miles!



LUBRICATED WITH RPM DELO SPECIAL LUBRICATING OIL, these representative parts from a diesel engine of a Pacific Greyhound bus appear just as they did when the engine was torn down after 200,275 miles continuous service. Mileage was accumulated during one

year's operation in the variable conditions on the Los Angeles-El Paso, Texas run. Wear on liners miked only 0.003 inch, camshaft 0.0015, and crankshaft journals only 0.0025 out of round. There were no broken rings or other parts.



THE ENGINE WAS EXCEPTIONALLY CLEAN. Note that there were no deposits on the pump screen or in pan. RPM DELO Oils keep contaminants in suspension so they flow out when oil is drained.



FREE BOOKLET on the RPM DELO Oils gives you complete information on how to meet any heavy-duty engine operating condition with one of these oils. Write or ask for it today.



TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

### How RPM DELO Oils reduce wear, corrosion, oxidation in all Heavy-Duty Engines



- Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.
- Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.
- Special compounds stop corrosion of any bearing metal and foaming in crankcase.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso  
THE CALIFORNIA OIL COMPANY, Barber, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado



[illegible]

For Key to References and Abbreviations See Page 101

**Turn to Page 112, Please!**





Continued from Page 1101

| Line Number | MAKE AND MODEL | Chassis List Price | WHEEL-BASE       |                  | TIRE SIZES                      |                         | ENGINE DETAILS                   |                |                  |              |               |                |                |                                    |                   |                | TRANS-MISSION  |                | REAR AXLE     |                |            | FRONT AXLE    |                | BRAKES             |             |           | FRAME         |      |                                  |                      |            |
|-------------|----------------|--------------------|------------------|------------------|---------------------------------|-------------------------|----------------------------------|----------------|------------------|--------------|---------------|----------------|----------------|------------------------------------|-------------------|----------------|----------------|----------------|---------------|----------------|------------|---------------|----------------|--------------------|-------------|-----------|---------------|------|----------------------------------|----------------------|------------|
|             |                |                    | Minimum Standard | Maximum Standard | Chassis Weight (See definition) | Standard Front and Rear | Maximum Tire Size (Dually noted) | Make and Model | No. of Cylinders | Displacement | Comp. Ratio   | Torque lb. ft. | H.P. at R.P.M. | Main Diameter and Number of Beings | Governor Standard | Make and Model | Forward Speeds | Make and Model | Gear and Type | Drive & Torque | Gear Ratio | Range in High | Make and Model | Location Type      | Lining Area | Drum Area | Hand Location | Type | C-A Dimensions (Min. Std. W. B.) | Side Rail Dimensions | Type       |
| 1           | Federal-Cont'd | 3053-3054          | 160              | 196              | 36000                           | 10440/9.0/20            | 9.00/20                          | Her JXLDF      | 6-4x4 1/2        | 3396         | 5288          | 142-3200/7     | 2-4x10 1/2     | Y Cia 205V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 2           | Federal-Cont'd | 3053-3054          | 160              | 196              | 36000                           | 10003/9.0/20            | 9.00/20                          | Con T637FE     | 6-4x4 1/2        | 3716         | 4297          | 145-3000/7     | 2-4x13 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 3           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 13150/8.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 4           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 13620/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 5           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 13900/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 6           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 7           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 8           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 9           | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 10          | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 11          | F.W.D.         | H6x6G              | 138              | Opt              | 30000                           | 14300/9.0/20D           | 10.00/20D                        | Wau MZA        | 6-4x4 1/2        | 4015         | 6291          | 130-3000/7     | 2-4x12 1/2     | Y Cia 290V                         | Y Cia 290V        | 5TSFD 157      | DR             | R7 66-...      | Tim 32514     | LT61HV         | 660 1338A  | TX            | 84             | 9 1/2x3 1/2x4 1/2  | TL          |           |               |      |                                  |                      |            |
| 12          | Kenworth       | (D) 522            | 191              | 255              | 42000                           | 14250/10.0/20           | 11.00/22                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 13          | Kenworth       | (D) 523            | 190              | 255              | 42000                           | 15500/10.0/20           | 11.00/22                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 14          | (D) 524        | 4R                 | 190              | 255              | 42000                           | 16500/10.0/20           | 11.00/22                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 15          | (D) 548        | 4R                 | 201              |                  | 50000                           | 20150/11.00/22          | 12.00/24                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 16          | (D) 552        | 4R                 | 178              | 255              | 50000                           | 14970/10.0/20           | 11.00/22                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 17          | (D) 552        | 4R                 | 178              | 255              | 50000                           | 14970/10.0/20           | 11.00/22                         | Cum HBR-600    | 6-5x6            | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 18          | (D) 525        | 4R                 | 175              | 255              | 42000                           | 14300/10.0/20           | 11.00/22                         | LeR H540       | 6-5x6 1/2        | 74316        | 540165-1800/7 | 4-4x16 1/2     | YBL 8241       | 4T U200PA44                        | H2F               | H5 91-9        | 76Tlm FE900N   | W61A           | 1080 1517A    | W61A           | 1080 1517A | W61A          | 1080 1517A     | W61A               | 1080 1517A  | W61A      | 1080 1517A    | W61A | 1080 1517A                       | W61A                 | 1080 1517A |
| 19          | Marmon-Herr.   | M-756              | 152              | 216              | 35000                           | 10200/9.0/20D           | 10.00/20                         | Ford           | 8-3              | 563 1/2      | 729/7         | 145-3800/5     | 2-4x16 1/2     | Y Ford                             | 10 Ford           | 10 Ford        | H              | H              | 8 1/2-7.2     | Own            |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 20          | Marmon-Herr.   | CM-756             | 152              | 216              | 35000                           | 10200/9.0/20D           | 10.00/20                         | Ford           | 8-3              | 563 1/2      | 729/7         | 145-3800/5     | 2-4x16 1/2     | Y Ford                             | 10 Ford           | 10 Ford        | H              | H              | 8 1/2-7.2     | Own            |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 21          | Oshkosh        | W-24000X           | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 22          | (D) W712-43X   |                    | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 23          | (D) W712-43X   |                    | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 24          | (D) W712-43X   |                    | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 25          | (D) W712-43X   |                    | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 26          | (D) W712-43X   |                    | 178              | Opt              | 35000                           | 15300/10.0/20D          | 10.00/20                         | Her RXC        | 6-4x4 1/2        | 529          | 410145-2200/7 | 3-4x13 1/2     | YPU 5A620      | 10Tlm SFD-157                      | 2F                | L              | 6-1            | Own            | W-2400        | T61A           | 1156 1889  | 2217          | 110            | 10 1/2x3 1/2x4 1/2 | TF          |           |               |      |                                  |                      |            |
| 27          | Peterbilt      | (D) 350            | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 28          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 29          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 30          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 31          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 32          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 33          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 34          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 35          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 36          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 37          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 38          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 39          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         | Cum NHB600     | 6-5x6            | 74317        | 500200-2100/7 | 4-4x16 1/2     | YSP 8041       | 12Tlm SW-3456                      | WF                | R6             | 16-6           | 80Tlm FE900DPA | W61A          | 1125 1569      |            |               |                |                    |             |           |               |      |                                  |                      |            |
| 40          | (D) 350        |                    | 193              | Opt              | 36000                           | 12600/9.0/20            | 10.00/20                         |                |                  |              |               |                |                |                                    |                   |                |                |                |               |                |            |               |                |                    |             |           |               |      |                                  |                      |            |

For Key to References and Abbreviations See Page 101



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*Custom Built for Lowest Lifetime Cost*

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Federal Fawick Corporation

Detroit 9, Michigan, U. S. A.



**BUILT TO HAUL THE GREATEST PAYLOAD FOR A LONGER TIME AT LOWER COST**

## ... Cooperative Safety Patrol

Continued from Page 65

ville, Fla., a private carrier with mills in six states and converting plants in 15, had this to say after receiving its first report, "Your courtesy in furnishing this report is appreciated, and it will enable us to further emphasize the need for safety among our employees at all times."

And these are just a few quotes from a thick file of letters supporting the program received from truck and bus fleet operators.

The patrol plan is an activity of PMTA's Accident Prevention Conference, presently headed by Robert Varner, Coastal Tank Lines, York, Pa.,

with James Reaver, Motor Freight Express, York, Pa., as chairman of the Conference's Observation Patrol Committee. O. D. Shipley, PMTA Safety Director, administers the program.

### How the Plan Works

**C**ENTRAL idea of the plan is cooperation—you observe my trucks and I'll watch yours. Presently there are 189 members including not only for-hire and private carrier safety supervisors but also truck and bus executives from other departments of the companies, representatives from insurance brokers, industry suppliers, government officials—state and local, oil companies, various regional safety councils and Pennsylvania State College's well-known Institute of Public Safety.

They come from Connecticut, the District of Columbia, New York, Pennsylvania, Maryland, New Jersey, Ohio, Michigan, Indiana, Illinois and Missouri.

The plan is simple in operation. Each member is given a numbered membership card, a pad of report forms (illustrated pg. 65), a few brief instructions and a supply of stamped envelopes addressed to PMTA.

### On the Highway

**O**UT on the highway, it is an easy matter to note both good and bad driving practices, fill out the report at the next stop for coffee or gas and drop it in the mail. And it does not have to be a vehicle from the observer's company.

The instructions emphasize getting the facts, say, "an inaccurate report will do more harm than good." They outline what information is needed for identification, how to fill out the blanks on the form and suggest what information fleet operators look for under the heading, "Remarks." Early speed checks ran into trouble, led to including the line asking for the date the observer's speedometer was last calibrated. Research showed that regular model speedometers could be off 7 to 8 mph, but reasonable accuracy could be had by having them calibrated every 30 to 60 days.

After receiving his supplies and membership card, it is up to the observer. But he does get a push every now and then from PMTA in the form of a periodic bulletin that includes, in addition to spot news and information, an "Honor Roll" and a listing of members of the "Almost But Not Quite Club." According to Shipley, it is not long before members listed here make the honor roll. To keep the membership active, names are dropped if no reports are submitted within 90 days.

(TURN TO PAGE 117, PLEASE)

## FROM EVERY ANGLE PYRENE IS YOUR BEST BUY



Pyrene Vaporizing Liquid Extinguishers are superior for vehicle fires, because the stream is longer and the liquid is nonconducting, nondamaging, nonfreezing, and has the smothering, cooling and penetrating actions required.

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1 1/2 qt. pump type

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A complete line of extinguishers for vehicles, shops and garages

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Affiliated with C-O-Two Fire Equipment Co.

## .. Cooperative Safety Patrol

Continued from Page 114

Reports are checked at PMTA State Headquarters in Harrisburg, where a copy is placed on file, and the original is sent to the carrier concerned. Observation reports do not include the observer's name, only his membership number. In this way the authenticity of the report can be checked and the neutrality of the observer maintained.

Shipley has not yet had time to make a detailed analysis of the reports received so far this year—about 2500 during the first three months, over 600 a month and a big boost over the average of 160 a month in 1952. He does know that excessive speed, illegal riders and unsafe passing are the leading violations and, from talking to the observation patrol members, says that 90 per cent of the commercial vehicle drivers observed are doing OK.

Although some companies would give permission to do so, the definite policy of the program is not to stop trucks observed unless, as the instructions to observers state, "... a situation is apparent that might be the immediate cause of an accident or fire."

The extra equipment carried in many of the patrol cars has been of great help to many trucks. Recently, an observer saw the trailer lights go off on a vehicle ahead of him. He signalled the driver over and, using the extra bulbs, fuses and tape from his patrol car, was able to help the driver make the necessary repair and keep going.

Another recent example was the observer who came across a driver with a tire fire. They burn hot, and the driver had emptied two extinguishers trying to put it out without success. The observer's larger extinguisher cooled the tire off enough so it could be removed from the wheel, saving the trailer and its cargo from probable destruction.

### Patrol's Turnpike Division

THERE is a special division of the observation patrol plan that keeps an eye on truck operation on the Pennsylvania Turnpike. There is no special qualification for this group except an interest in the special problems arising from Turnpike operation—mainly high speed and passing. These observers get together once a month—usually at Bedford, Pa., central point on the Pike—to exchange information and ideas. This special activity arose from a meeting last November called to see what could be done to further reduce truck accidents on the toll road.

Cooperation with the Pennsylvania State Police—both off and on the Turnpike—and with local enforcement officials has been good. In the beginning, the police were a little suspicious, afraid the highway patrol was out to white-wash the truck drivers or interfere with their enforcement job. The success of the program has changed that and cooperation is the general rule today.

Incidentally, many of the patrol cars have mobile telephones, and some observers have attached short wave converters to their car radios. Quick telephone contact between observers bring the company's representative to the scene of an accident quickly. On the Turnpike, short wave reception of the State Police Turnpike wave length makes it possible for patrolling observers to arrive at the scene fast and assist the State Police in traffic control and first aid.

### What Are the Results

COMMENTS from the observers lead to the conclusion that the patrol plan is paying off in an intangible way. Truck drivers, becoming aware of the operation of the plan, are being more and more careful. With only about half the cars in the patrol identified as safety patrol cars, they are never quite sure

(TURN TO PAGE 118, PLEASE)

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## .. Cooperative Safety Patrol

Continued from Page 117

when they are being observed. Recently an observer, seated in his unmarked car at a coffee stop, watched a truck drive up. However, instead of going in for coffee, the driver came over to the observer and asked how he (the driver) was doing. He told the observer he had heard about the observation patrol plan adding, "It really keeps us on our toes these days."

### Fast Becoming Nationwide

SO FAR this year, PMTA has received reports on observations made in Massachusetts, Connecticut, New York, Pennsylvania, Maryland, New Jersey, Delaware, Virginia, West Virginia, Ohio, Indiana, Illinois, Michigan, the District of Columbia and Ontario, Canada.

After being checked at PMTA headquarters in Harrisburg, the reports have been mailed to bus and truck operators in 28 states and the District of Columbia. In addition to the states named above, they have gone to North

Carolina, South Carolina, Florida, Tennessee, Alabama, Wisconsin, Missouri, Iowa, Minnesota, Nebraska, Texas, Wyoming, Colorado, Arizona and California.

In fact, anticipating the spread, PMTA held a meeting in Harrisburg last February which was attended by fleet safety men and officials from six eastern states. A check showed similar plans in operation in Indiana and Massachusetts. Presently, similar plans are being organized or considered in Maryland, Michigan, New Jersey, North Carolina and Ohio. American Trucking Assns. has now adopted PMTA's report form for nationwide use and is organizing a program to coordinate each state's operations to prevent overlapping.

### Do Fleet Operators Use Reports?

ONE of the main purposes of the cooperative safety patrol is to keep operators informed on what their trucks are doing on the highway. Do these reports dead end on the boss's desk or are they put to use? Let us look again at PMTA's file of letters.

Blue Ridge Lines, Hagerstown, Md., a bus operator, wrote, "... we will take definite action with the driver involved."

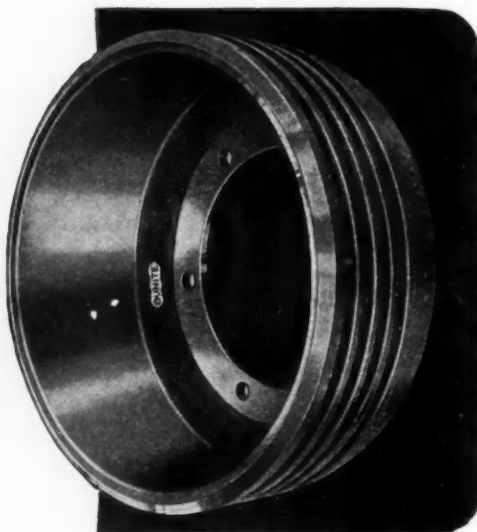
One common carrier has established the policy that five reports from five different observers is sufficient cause for dismissal. The company checks each report with the driver concerned, sometimes finds out about other violations. One driver denied having an illegal passenger, but investigation turned up inconsistencies in his log and a 70 mph run down a hill.

F. J. Boutell Driveaway Co., Inc., Flint, Mich., passes the comment on to the driver or supervisor depending on the action required. In a recent note to a driver, the company noted, "Inasmuch as this represents your first such violation, this letter will serve as an initial warning in regard to speeding. Any further infractions of these regulations will subject you to disciplinary action to consist of a three-day suspension from duty." But such warnings are not always the case. In a note to a supervisor, after citing several traffic safety violations, the company concluded, "Inasmuch as there is an unauthorized passenger involved in addition to the flagrant safety violations you will doubtless place yourself in a position to release Mr. (the driver)."

From car carrier J. H. Sprecher, Inc., Lebanon, Pa., came this report: "You may be interested in knowing that all such reports are first reviewed with drivers. We compare your time and location report with drivers' logs. Driver is listed with good or bad reports, as case may be, in our monthly

(TURN TO PAGE 120, PLEASE)

**More  
Miles  
of  
SAFE STOPS  
with...**



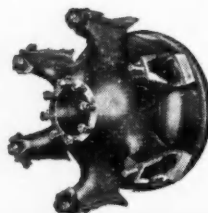
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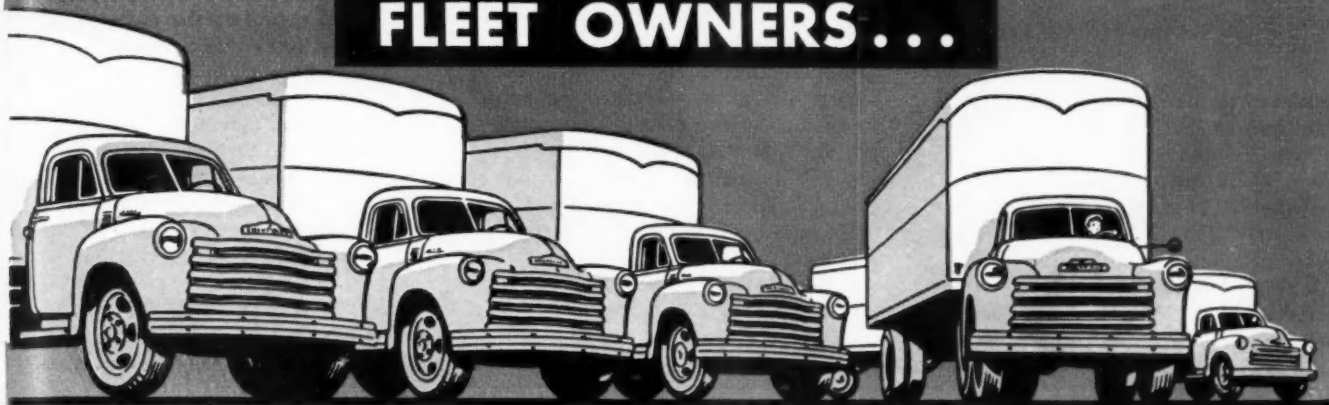
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- 2** Help reduce fleet maintenance time and operation costs, *thus*
- 3** Keep your vehicles on the highways *plus*
- 4** Expert help in solving your service problems

## .. Cooperative Safety Patrol

Continued from Page 118

Company Bulletin. For bad reports, punishments in compliance with the Revised Uniform Rules and Regulations, as agreed upon by the National Automobile Transporters Assn. and the Teamsters' Union, A. F. of L. are meted out."

Heavy hauler and riggers, Dade Trucking, Inc., Mineola, N. Y., replied to a report, "We have corrected the

lights and reflectors and have cautioned our Maintenance Department and drivers regarding the necessity of having these items in good condition."

Motor Cargo, Inc., Akron, Ohio, wrote, "I have this date had our driver into the office and thoroughly discussed the whole matter with him. . . ."

From Lancaster (Pa.) Transportation Co. came this response, "When these reports are received we determine the name of the particular driver that was on the vehicle at that particular time. A letter is written to that driver calling his attention to the observation

that was made and reported to us. His team captain in our own safety program is notified regarding the incident. This becomes a part of his record and is filed in his individual folder. In addition to this, the particular driver with his steward or team captain is interviewed personally and reprimanded according to the seriousness of the offense."

From Rensselaer, N. Y., common carrier Dorn's Transportation, Inc., noted, "This correspondence has been made a permanent part of this driver's Safety Record and will be considered when his record is evaluated at the end of this calendar year for the annual Safe Driver Awards."

From local trucker H. L. & F. McBride, Goshen, N. Y., came this comment, "Each observation report . . . is evaluated and the proper notations are entered in the driver's personnel file. This is the only method we have of obtaining operational control over our drivers, while they are on the highway."

And sometimes the reports give assurance of the effectiveness of safety training programs.

After receiving a report commending one of their drivers, Fruehauf Trailer Co., Detroit, wrote, "I am sure you will be pleased to know that for the past several years we have been conducting a rather vigorous campaign on safety, as well as courtesy, and it is very gratifying to know that our efforts are bearing fruit."

### Would You Like to Join?

**M**EMBERSHIP in the program is not confined to highway safety specialists, although they do make up the greatest part. If you have a sincere interest in highway safety, are connected directly or indirectly with the truck or bus industry and are out on the highway a reasonable amount of time, chances are you can get a membership card. Shipley says, "The more active members we have, the more effective our program will be and so we're always ready to welcome applications."

For further information, contact O. D. Shipley, Safety Director, Pennsylvania Motor Truck Assn., Seventh Floor, Telegraph Bldg., Harrisburg, Pa.

END

Please Resume Reading Page 66

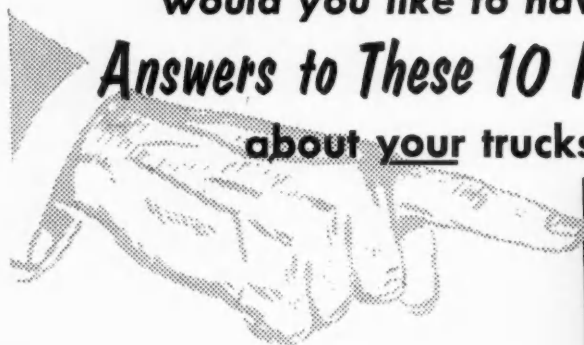
First Truck Driver: "Congratulate me, big boy. My doctor just passed me as 100 per cent on my I. C. C. physical examination. I have 20-20 vision."

Second Truck Driver: "I've got 16-30 vision."

First Truck Driver: "Boy, you're in a mess. Doesn't it trouble you?"

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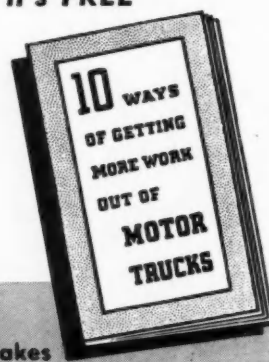


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| Exclusive air coating                         | ✓  | ✓   | ✓   | ✓   |
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| Modified drum control                         | ✓  | ✓   | ✓   | ✓   |
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| Wire rope lift                                | ✓  | ✓   | ✓   | ✓   |
| Alloy steel coil roller chain                 | ✓  | ✓   | ✓   | ✓   |
| One point positive lubrication                | ✓  | ✓   | ✓   | ✓   |
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- (2) The neat, strong curtain of interlocking steel slats assures long, dependable service and low maintenance costs.
- (3) The all-metal construction of Kinnear Rolling Doors gives you extra protection against fire, intruders, wind and storm damage, and other hazards.

By opening straight upward with smooth spring-counterbalanced action, they assure quick, easy operation under all conditions. They can be equipped for manual, mechanical, or electrical control. Any number of remote control switches can be used with motor operated doors, for maximum convenience. (Trolley bridges that operate automatically as the doors open and close are also available.) Kinnear Rolling Doors are built in any size, for easy installation in old or new buildings. Write for complete information.

### The KINNEAR Manufacturing Co.

Factories: 2100-20 Fields Ave., Columbus 16, Ohio  
1742 Yosemite Ave., San Francisco 24, Calif.  
OFFICES AND AGENTS IN ALL PRINCIPAL CITIES



**SAVING WAYS  
IN DOORWAYS**

**KINNEAR**  
ROLLING DOORS

## .. Branch Shop Goes Modern

Continued from Page 73

easy selection. Various sized nuts and washers are also readily available from a rack of boxes which may be moved from place to place in the shop.

Keeping floors clean poses no problem, even though they are of natural-finish concrete. Oil drippings are easily removed by spreading a commercial floor cleaning compound and scrubbing briskly with a wooden block on a long handle. The compound absorbs the oil and is swept away, leaving the floor as good as new.

From the accompanying floor plan it will be seen that vehicles may enter the shop either directly from the yard or through the garage. Usually vehicles are driven through the garage, cleaned off on the wash rack, then driven into the shop.

The large L-shaped garage features two full-length drains stretching from door to door. These are particularly useful in wet and winter weather to catch drippings from trucks while they are driven to their parking space. The garage also has a full-length loading dock along the west side; two wash racks, one along the east wall, the second in the west section.

At each end of the garage there are two electrically operated doors. As a safety feature, the doors open completely after instant contact of the "Open" button. The "Close" button must be held until the doors are completely closed; if the button is released the doors return automatically to the full open position.

END

Please Resume Reading Page 74

### Small Truck, Mighty Squirt



This little but mighty fire engine was designed to negotiate narrow factory aisles, go anywhere in the Baltimore, Md., plant of General Motor's Chevrolet Division. Fire extinguishing equipment fitted onto the Model No. C7-21 Clark-tor mule includes an Ansul S-150 dry chemical unit behind the driver's seat, two Ansul 20-B hand units on each front fender, a 50-lb carbon dioxide cylinder and a small vaporizing type extinguisher.

Modern

Page 73

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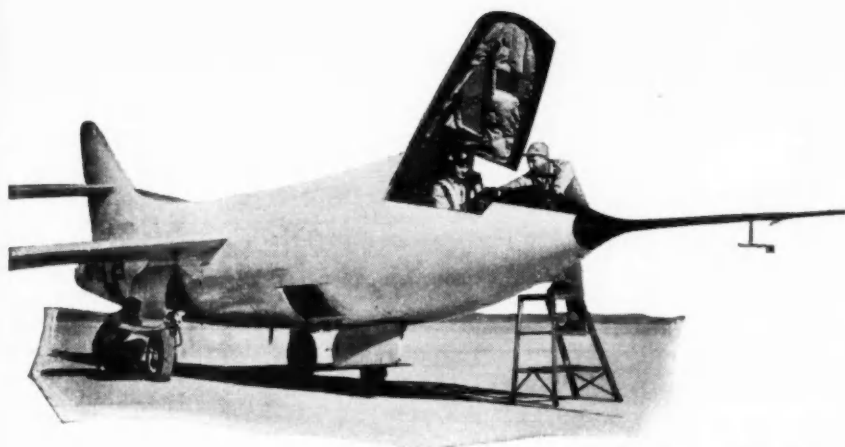
Page 74

Squirt



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June, 1953

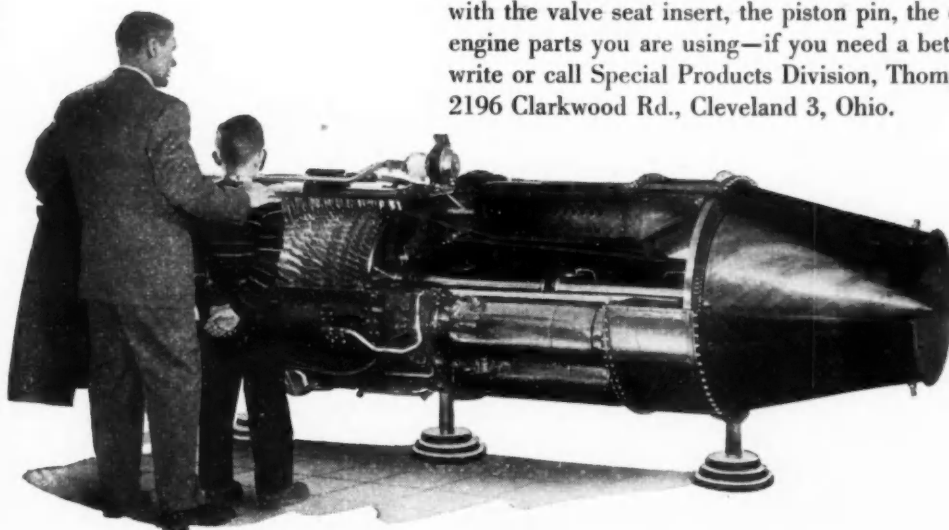


Ever since the Wright brothers first left the ground 50 years ago, Thompson Products has been part and parcel of the aviation industry, striving always to make manufacturing more precise and cheaper—to discover new ways to use new metals, to introduce new processes. Today, Thompson makes parts and accessories for virtually every plane that flies, every vehicle on farm, rail and highway.

## Performance you can take for granted!

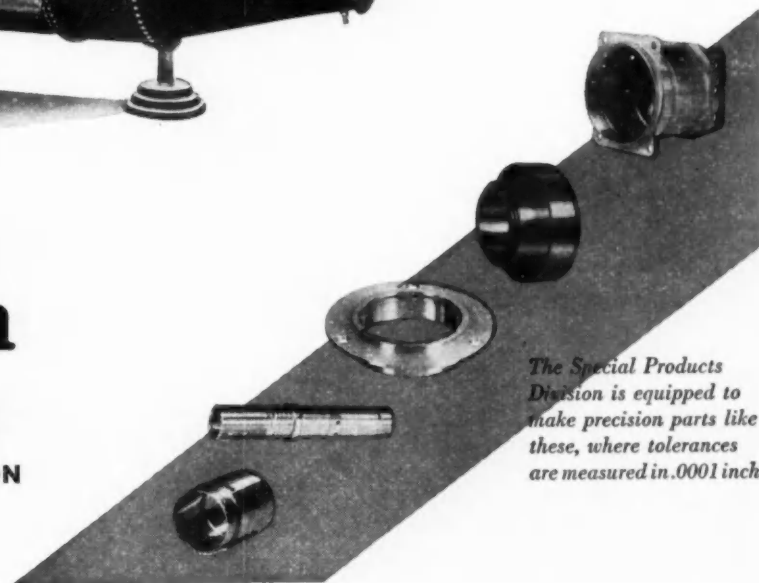
Modern mass production depends on a constant flow of component parts. Parts that are once specified can be forgotten. The same research, metallurgical knowledge, precision manufacturing and testing that go into highly specialized jet and defense parts is back of every part made by Thompson's Special Products Division.

You can count on Thompson for dependability of supply, quality, exact tolerances and maximum performance and service. If you are having trouble with the valve seat insert, the piston pin, the cylinder sleeve or other engine parts you are using—if you need a better, more dependable supplier, write or call Special Products Division, Thompson Products, Inc., 2196 Clarkwood Rd., Cleveland 3, Ohio.



You can count on  
**Thompson  
Products**

SPECIAL PRODUCTS DIVISION



The Special Products Division is equipped to make precision parts like these, where tolerances are measured in .0001 inch.



## ... Guide to Vehicle Replacement

Continued from Page 67

The operating cost curve rises gradually at a declining rate. This cost might include customary operating expenses, such as gasoline, lubricants, tires and incidentals.

The unreliability cost curve reflects an estimate of the direct and indirect losses from increasing undependability,

as indicated by road breakdowns and idle time for repairs.

The combined cost curve is the sum of the several component cost curves. It declines at first, reaches a low point, and then rises when rising maintenance, operating and unreliability costs more than offset declining capital wastage.

### Average Lifetime Cost

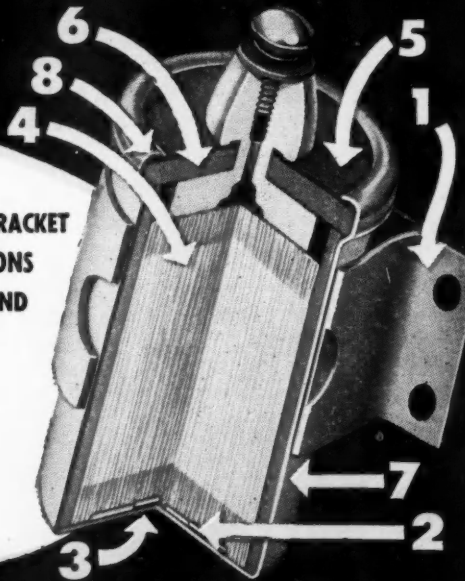
ONCE the combined cost of operating the old truck is established, both for its lifetime to date and the expected cost at least one year hence, the next problem is to compute the *average lifetime cost* of the new truck. Many people do not understand why the new truck cost curve is averaged and therefore flat. The answer is important and relatively easy to explain. The decision to keep the old truck makes only a short term commitment for one more year or less. But the alternative to buy a new truck makes a long term commitment to incur the cost of running the new truck throughout its economic lifetime. It is therefore only the lifetime average of the new truck that is relevant.

Admittedly it is far easier to plot the actual costs of the old truck than to forecast the expected cost of the new truck. Yet this must be done. Of course the starting point for the forecast is usually past experience. But adjustments must be made for changed construction and probable improvements in the new truck and any changes in your own operating conditions. The biggest hazard is the rate of future obsolescence

(TURN TO PAGE 128, PLEASE)

## to get **LONGER CONTACT LIFE!** ... USE **ECHLIN** **CAPACITY RATED CONDENSERS**

- 1 PERMANENT UNIVERSAL BRACKET
- 2 HIGH PRESSURE CONNECTIONS
- 3 CAPACITY STAMPED ON END
- 4 NON-INDUCTIVE WINDING
- 5 NEOPRENE INSULATION
- 6 HEAVY BAKELITE WASHER
- 7 HEAVY DUTY CASE
- 8 PRESSURE SEAL



PLUS  
TUNGSTEN

ON  
PLUS  
CONTACT

REQUIRES  
PLUS CAPACITY

PLUS  
TUNGSTEN

ON  
MINUS  
CONTACT

REQUIRES  
MINUS CAPACITY

First, install Echlin HD-25 Condenser (.25 mfd.) for 5,000 miles. If there is no pronounced build-up on either contact, capacity is just right for conditions under which vehicle is operated. If build-up is on positive contact, use higher capacity Echlin Condenser, HD-30 (.30 mfd.). If build-up forms on negative contact, use lower capacity Echlin Condenser HD-20 (.20 mfd.).



# ECHLIN

# Ignition



CONTACTS  
COILS - CONDENSERS  
& OTHER AUTOMOTIVE  
ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY • 234 EAST ST., NEW HAVEN 5, CONN.

### Blackboard Controls Work



At the Portland terminal of West Coast Fast Freight every tractor and trailer that comes in is listed by number on this blackboard. After the space for the number there are two squares marked L and M, L for lube and M for mechanical work. When the tractor has been lubed, the mechanic or lube man who had charge of the job comes to the board and draws a line through the lube square after the tractor number. On mechanical work the same procedure is followed. "This board is law," D. E. Belt, shop superintendent says, "if a dispatcher wants to know if a tractor or trailer is ready to go out, all he has to do is to look at the board."

# "OPERATION MS"

(MOST SEVERE)

The American Petroleum Institute classifies everyday start-stop, low-speed traffic idling driving as Service MS, the most severe of all operating conditions. This is the driving pattern of the great majority of fleet engines.

Under "Operation MS," the engine seldom really warms up—maximum combustion blow-by creates soots, carbon, lead compounds and the most objectionable of all contaminants, *water in the oil*.

Water in the oil is the chief cause of sludge, most important source of engine operating difficulties. Water in the oil is the source of corrosive crankcase acids, a major cause of engine wear.

Walker Oil Filters are recommended for "Operation MS" (Most Severe) because they remove

solid contaminants from the oil . . . and water, too. Walker patented *Laminar* construction takes out dust, dirt and abrasives through famous 3-way filtration. And the exclusive *Laminar* filtering material selectively removes water from the oil . . . helps keep the moisture content below the critical "sludge danger zone" . . . minimizes acid wear by absorbing the acids contained in the water removed from the oil.

Walker Oil Filters are designed to protect oil and engine under the most severe of all operating conditions.

No other oil filter more completely meets the extra requirements of "Operation MS." No other oil filter more completely meets the needs of your fleet operations.



The advertisement features a composite image. On the left, a close-up of a piston is shown. In the center, a hand holds a sign that reads "OPERATION MS (MOST SEVERE) the result". On the right, a hand holds a Walker oil filter. Below these, two more Walker oil filters are shown, one with the brand name clearly visible. A circular logo on the right side of the filters reads "GET IT FROM YOUR JOBBER".

## WALKER OIL FILTERS

WITH PATENTED *Laminar* CONSTRUCTION

## ... Vehicle Replacement

Continued from Page 124

and it is usually safer to err in the direction of underestimating its expected life.

Next the combined cost of operating the old truck is plotted against the average lifetime cost of the new truck as in Figure 2. The key to timing the replacement is contained in the expected cost savings shown in the shaded area between the two graphs. The present truck should be replaced if its expected

cost (both initial and operating) during the next year are sufficiently higher than the average annual cost of the new truck by a sufficient margin to yield an adequate cost savings return on the capital needed to purchase the new truck.

### Projecting Future Costs

THAT in a very condensed form is the basic operation of the plan. Of course, there are many variables in projecting future costs that must be left to individual judgment.

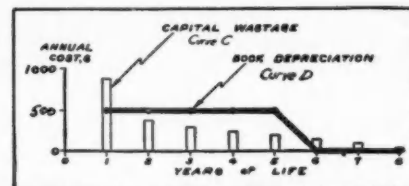


Fig. 3. Typical difference between book depreciation (an arbitrary accounting dept. figure) and capital wastage (based on actual value) at yearly intervals

It should be noted that the important capital wastage curve is based on the market value of the vehicle at various ages. This may vary considerably with any book depreciation rate established by the company. The vital difference between the book value and the actual market place value is in the time distribution. Both will eventually account for the same aggregate amount but at different time intervals as shown in Fig. 3.

In predicting future market values, economic trends must also be carefully considered. Artificially high market values resulted from the shortages following World War II and the Korean conflict, from steel strikes and other related causes. It may, therefore, be necessary to plot both a present level curve and an anticipated future level curve as shown in Fig. 4.

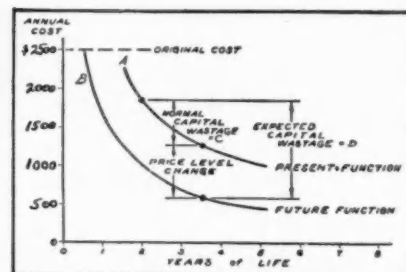


Fig. 4. Sometimes it is necessary to adjust capital wastage curve to expected changes in market values which may be caused by shortages, surpluses, etc.

Curve A represents the disposal value-function now. Curve B is this forecasted curve one year hence, assuming a possible price decline. To estimate the future capital wastage, we must hop from the age-two value on Curve A to the age-three value on Curve B, instead of moving down one year on Curve A, as in a normal market. Thus, on the diagram, the estimated future decline in disposal value is the distance D instead of the normal wastage C. For very old trucks the age decline becomes negligible and the market shifts may become relatively more significant in estimating capital wastage.

END

Please Resume Reading Page 68

COMMERCIAL CAR JOURNAL, June, 1953

## LEADERSHIP IN LAMPS



Photometer measures lamp candlepower and is one of many tests in Tung-Sol's quality control procedure.

Tung-Sol has specialized in the design and manufacture of miniature lamps ever since electricity replaced oil for automotive lighting. Tung-Sol was first with Tulite, a double filament lamp and first with the fixed focus headlamp.

Today Tung-Sol offers the truck and bus industry a complete line of 12-16 volt lamps made extra-tough for extra-tough service. Tung-Sol performance standards are the highest in the industry and are the same for original equipment and replacement. To get the best in lamps, specify Tung-Sol when ordering from your supplier. You'll find your lamp dollar will go farther.

TUNG-SOL ELECTRIC INC., Newark 4, N. J.  
Sales Offices: Atlanta, Culver City (Los Angeles),  
Chicago, Dallas, Denver, Detroit, Newark,  
Philadelphia, Seattle

**TUNG-SOL®**  
AUTO LAMPS  
SIGNAL FLASHERS



TUNG-SOL makes All-Glass Sealed Beam Lamps, Miniature Lamps, Signal Flashers, Picture Tubes, Radio, TV and Special Purpose Electron Tubes and Germanium Products.



Every Day...

all over the U.S.A.  
mechanics  
depend  
on...



## FEDERAL-MOGUL SERVICE

(Division of Federal-Mogul Corporation)

DETROIT 13, MICHIGAN

Engine Bearings (Main, Connecting Rod and Camshaft) • Bushings • Connecting Rod Service—Exchange Insert Rods, Rebabbitted Rods • Connecting Rod Bolts and Nuts • V-Seam Piston Pin Bushings • Shims and Shim Stock



COMMERCIAL CAR JOURNAL, June, 1953

# Ten States Schedule Rodeos

Continued from Page 94

tine, 50; Alley Dock, 50; Parallel Parking, 50; Straight Line, 50; Stop Line, 50.

There shall be a chief recorder and two assistant recorders who also will serve as spotters in receiving the points earned or lost signals from the field judges.

The recorders are to maintain their headquarters on the field of action where they can plainly see and interpret field judges signals for the accurate recording of points earned or lost by the contestant.

Field test judges, the rules provide, are to be completely familiar with the

arm and hand signals scoring system and their use, and further be completely familiar with the field test problem or problems to be judged and how the contestant is to accomplish the problem so that they may accurately judge the contestant as he negotiates a given problem or problems. Field judges will position themselves so that they are visible at all times by the recorders. When giving a signal, the field test judge will face the recorder so that their signals are visible and properly interpreted by the recorders.

The announcer at the beginning of the running of the field tests, is to explain to the audience the arm and hand signal scoring system and have the field test judges visibly demonstrate each signal to the audience as the explanation is given.

## State Assn. Rules

ALL contestants entered in any truck rodeo jointly sponsored by two or more state associations are subject to the same eligibility rules that apply to a contestant entered in a single association state contest.

The rules provide that:

"Each state association running a truck rodeo shall have the option of requiring the contestants to name the type or types of vehicles they elect to drive in competition at the time they enter the rodeo. If such equipment is not available at the time of the running of the rodeo, the contestant involved must choose from the equipment entered in the contestant's class of competition available on the field.

"Contestants selecting equipment available on the field for use in the field tests prior to the time the field tests begin must use the same equipment or make and model throughout the contest.

"When two or more states desire to unite and jointly sponsor a truck rodeo they may do so and all rules governing a single state contest are applicable to jointly sponsored contests. The winning champion in each class of competition in a jointly sponsored truck rodeo shall have the same status in the national truck rodeo as that now enjoyed by a champion representing a single state."

END

Please Resume Reading Page 96

Wrinkled Old Maid: "You ba-a-d boy. Don't you dare kiss me again." Freight Checker: "Don't worry, miss, I won't. I'm trying to find out who has the bourbon at this party."

**AMMCO makes them all!**  
engine repair, brake service  
and honing equipment

**The Complete Line**  
is available from your AMMCO jobber

**Play Safe with Ammco...The Big Buy!**  
**AMMCO TOOLS, INC.**  
2118 COMMONWEALTH AVE. • NORTH CHICAGO, ILL.

**WET HONING MACHINES**  
**BRAKE GAGES**  
**SAFE-ARC BRAKE SHOE GRINDERS**  
**BRAKE CYLINDER HONES**  
**DRY HONING MACHINES**  
**BRAKE DRUM MICROMETERS**  
**RIDGE REAMERS**  
**CONNECTING ROD ALIGNERS**  
**CYLINDER SURFACING HONES**  
**PORTABLE COOLANT UNITS**  
**TAP-ROCK GRINDERS**  
**BRAKE CYLINDER SURFACING HONES**  
**CYLINDER HONES**  
**SMALL BORE HONES**  
**PIN VISES**  
**LINE BORING MACHINES**  
**TORQUE WRENCHES**  
**SAFE-TURN BRAKE DRUM LATHES**

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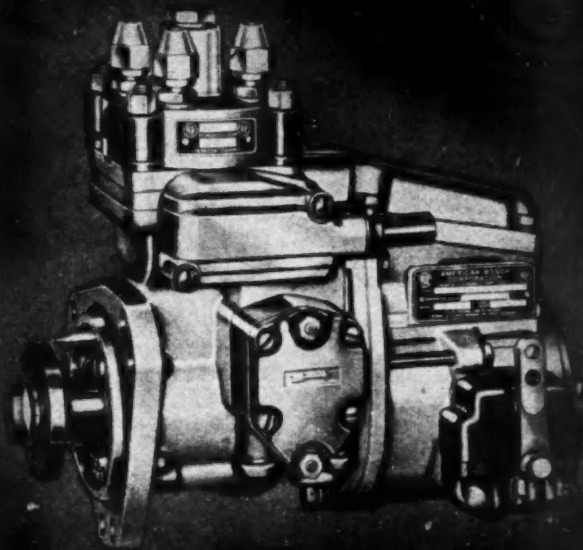
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June, 1953

*greatest single advance in diesel fuel injection.*



**AMERICAN  
BOSCH**

American Bosch single-plunger multi-cylinder pumps have literally revolutionized the concepts of diesel fuel injection.



## ... Cuts Accident Rate by 20%

Continued from Page 69

ting a report on the interview to Personnel. If the driver's record over the next six months shows no improvement, the divisional superintendent gets another high sign. If the succeeding interview produces no beneficial results, Personnel calls the driver in for a talk with the chief instructor. An attempt is made to ascertain whether attitude or ability is

at fault, and corrective measures taken. The driver is placed on probation and, if no progress is made, he is finally released.

MTC finds this system works for two reasons: (1) By first giving the divisional superintendent the opportunity to correct the erring driver, the former is made to feel he has a place in the

safety program and extends his cooperation. (2) And the driver knows he has plenty of time to redeem himself, doesn't live in an atmosphere of anxiety.

Howard Baker feels that the long-entrenched apathy towards safety was licked through a good system of employee communication. Employees were informed of all moves, provided with an understanding of accident causes. Day-to-day summaries, accident location maps, inter-divisional record charts were posted at all terminal bulletin boards to give a sound physical picture of what was transpiring in each territory.

### Two Safety Contests

BAKER admits that he got the most effective rise out of the hard-to-crack oldtimers through the safety contests: "The element of gamble seems to be ever present in this city. Once the race is on, you can just feel the boys warming up." MTC's competitions are of a wide-open nature as contrasted with the fixed progression type of reward in most safety contest plans.

Actually, there's two different types of contests. First there's a team competition: All the men in a single operating division using the same equipment, driving on the same streets and under the same traffic conditions, try to improve their own operating accident record over their previous year's showing. In this, they're matched against each of the other operating divisions.

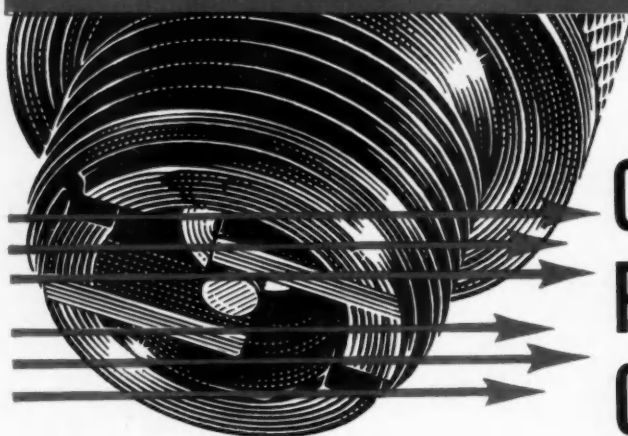
In the second type of contest, the emphasis is on the individual operator. Any employee who hasn't been involved in a chargeable accident over a set period, rates a chance at winning a valuable merchandise prize. The two types of contests are complementary. A man eliminated from the personal award competition through a chargeable accident still pulls hard for his team in the divisional competition.

At the last prize draw for 1952 winners, some 1600 employees and their wives turned out at the big social evening to receive a total of 188 valuable household articles. Professional artists provided entertainment between presentation of prizes. These competitions are especially potent, Howard Baker believes, because of the further "pressure" exerted on the driver from "above"—his wife.

Interest in the inter-divisional contest is maintained from month to month by the presentation of the MTC safety flag to the leading division. Through the ensuing month the flag flies proudly at the winning division's terminal. At each of the less fortunate terminals, there's an empty flag-holder and this written reminder: "WHY ISN'T THE SAFETY FLAG FLYING HERE?"

(TURN TO PAGE 136, PLEASE)

## NEW SHROUDED DESIGN!



**CUTS  
PLUG  
COSTS!**

Use the new Hastings Aero-type *Shrouded*—for better performance, greater economy, much longer spark plug life!

Hastings saves you money by taking the electrodes out of the combustion chamber, "shrouding" them from the hot flame sweep. And Hastings gives you *two* ground electrodes—twice the metal area to wear away.

This unique design permits *higher* insulator temperature to reduce fouling, yet *lower* electrode temperature to cut down erosion.

And, for the first time, you'll have a plug that can be cleaned—easily and thoroughly. That's added plug service, and even lower cost.

Write Dept. C for illustrated catalog. Spark Plug Division, Hastings Manufacturing Company, Hastings, Michigan.

(Spark Plugs, Piston Rings, Oil Filters, Casite, Drout)

**HASTINGS**  
*Aero-type*  
**SHROUDED SPARK PLUGS**



# SCIOUS CARRIER ON FRUEHAUFS!

## Hard Experience Convinces One More Trucker That "Specs"—Not Price—Set Trailer Value!

AFTER BUYING ON PRICE for many years, another of the nation's biggest Trailer operators has found that "bargains" aren't always what they seem—and settled on Fruehaufs. It's a perfect example of the cost-conscious trucker who wants a dollar's worth

for a dollar—and discovers that Fruehauf is the place to get it. Because "specs"—not price—determine the *value* and the *earnings* of a Trailer.

This carrier, who recently put 60 ★Stainless★ Tandems into operation on hauls that extend from Kansas City to the East Coast, followed with a second order for 100 more 35-foot ★Stainless★ Fruehaufs. The reasons? Stainless Steel units never deteriorate, cost less to maintain, and earn longer. And the Fruehauf Gravity Tandem—one of many plus-value features—costs least to operate, gives the best tire mileage, and is the only *fully-guaranteed* Tandem in the industry.

The features, the specifications, and the value explain why leading truckers everywhere are changing their views about price—changing to Fruehaufs because *better equipment* is the real criterion of Trailer value. This deserves thought in *your* operation, too.

World's Largest Builder of Truck-Trailers

**FRUEHAUF TRAILER COMPANY**

Detroit 32, Michigan

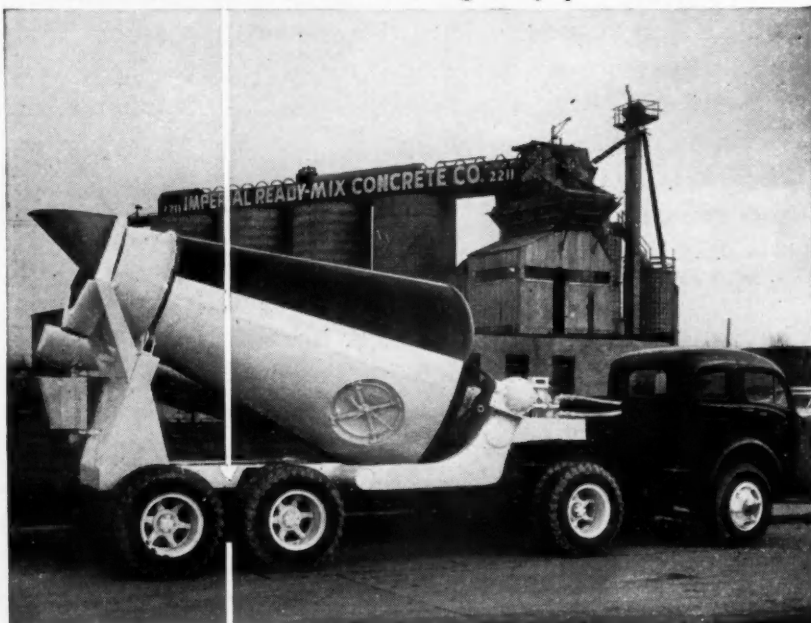


**IF YOU MANUFACTURE  
EQUIPMENT WITH A SPECIALIZED  
SUSPENSION PROBLEM . . .**

*specify*  
**HENDRICKSON**

**for example:**

**Imperial equip this special Ready-Mix Trailer with hydraulically-powered tandem rear axles. Providing additional traction for off-highway job locations.**



**HENDRICKSON  
TANDEM**

One basic design  
for every tandem  
installation . . .

**HENDRICKSON MOTOR TRUCK COMPANY**

8001 West 47th Street • Lyons (Chicago Suburb) Illinois

## Cuts Accident Rate by 20%

Continued from Page 132

### Driver Training

**BACKDROP** for this conscientious safety program is an exhaustive program of driver training and selection. MTC's Personnel Department lays heavy stress on job analysis, reasoning thusly: "We don't put machines in to do specific jobs without first drawing up detailed specifications as to their required construction and performance. It's even more important that we extend the same consideration to the human element of our safety program."

Selection techniques include an exhaustive battery of aptitude, educational and achievement tests. Training is actually spread out over several months and takes in all types of vehicles in the system. For instance, a trainee will spend his first three weeks on a street-car, learning both motorman and conductor duties. Then he goes out on the road in a street car under fairly close supervision for three months.

Only then—after he has a full appreciation of fixed rail operation—does he move on to bus training. (Of course, most times, he will have had previous experience driving his own car or truck before he is selected for bus training.) This training is again followed by practical, closely supervised experience on the road. The final week of the course is devoted to trolley-bus training.

Howard Baker credits far-sighted management—right up to Arthur Duperron, chairman and general manager of Montreal Transportation Commission and the other sympathetic commissioners—with a generous portion of the program's success. Cautions Baker: "Employees will not pay much attention to safety activities unless they see that someone in a high executive position is participating. Laxity by management in setting up control systems for selecting and training employees, maintenance and inspection of vehicles, contributes to accidents. Prestige is important for the safety engineer. Management must attach importance to his worth. Otherwise no one else in the organization will pay much attention to him. A safety engineer who has to go around with his hat in his hand and come in by the side door will rarely be able produce satisfactory results."

**END**

*Please Resume Reading Page 70*

SHOP FOREMAN: "SAY ABNER, WHAT IN TARNATION MADE YOUR TONGUE SO BLACK?"

SHOP ROUSTABOUT: "I DROPPED A BOTTLE OF BOURBON ON A FRESH TARRED ROAD."

COMMERCIAL CAR JOURNAL, June, 1953



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## 26,000 uphill miles per year! BUS LINE UP A VERMONT MOUNTAIN USES CITIES SERVICE GASOLENE AND OIL!



**Says Rodolph Chartier, Mgr.:**  
**"Only Cities Service Products**  
**Have Provided The Quick, Sure**  
**Starting, Power and Thorough**  
**Lubrication We Must Have!"**

Up the mountain, down the mountain... up the mountain, down the mountain... 21 times a day! That's about as rugged a bus route as you'll find, in a really rugged piece of country.

Vermont winters are cold... and winter starting is a problem. Chartier says: "Cities Service Gasolene gives us quicker starting than any other."

Twisting, turning, uphill Vermont roads are rough. Chartier says: "We haul 80,000 passengers, 52,000 miles per year and Cities Service Gasolene provides more power than we need... more than we've ever had."

Heavy loads and tough hills mean hot engines. Chartier says: "Cities Service Triple HD Koolmotor Oil, S.A.E. 20, provides thorough lubrication under these engine-breaking conditions. We seldom add a pint between thousand-mile changes."

**Why not consider Cities Service Gasolenes, Oils and Greases**  
**in your Bus or Trucking Operation?**

COMMERCIAL CAR JOURNAL, June, 1953



From Barre, Vermont—To Graniteville, Vermont, COMMUTERS AND SCHOOL CHILDREN are never disappointed. Chartier's buses are always right on schedule, thanks to Cities Service Products.



CHARTIER SWITCHED TO CITIES SERVICE four years ago. He noticed "an immediate increase in power and better performance than any other gasolene had given." Chartier handles own lubrication with Cities Service Trojan Greases.



QUALITY PETROLEUM PRODUCTS

# Gulf Service Plan Aids Motor Carriers

Continued from Page 79

forms are submitted in an endeavor to develop a satisfactory system that will conveniently give good truck stop coverage within the territory of operations and bring about certain economies. Whenever applicable, the section includes:

1. Suggested Letter to Dealers—for use by the hauler in establishing con-

tact with the truck stop dealers selected.

2. Suggested Outline of Dealer Procedures—agreement between hauler and truck stop dealer as to services to be rendered by the dealer.

3. Motor Fuel Purchase Control—tabulation sheets for each of the states indicated on the Information Guide form by the hauler, showing one-way

mileages, the estimated total fuel consumption on a round trip basis from home terminals to destination points, and the estimated gallonage that should be purchased on the road at truck stops for each type of vehicle used by the hauler.

4. Tabulation of Round Trip Mileages and Motor Fuel Consumption—(Fig. 4) for equipment having certain fuel carrying capacities and mpg characteristics as shown on the Information Guide. (See page 140.)

5. Authorization for Purchase of Motor Fuel—forms (Fig. 2) which can be issued by the dispatcher to drivers and should signify the gallonage to be purchased at indicated truck stops between home terminals and any destination point.

6. Daily Preventive Maintenance—Safety Road Check Report—checkoff list (Fig. 5) for daily use by service station attendants if such an agreement is desired and has been arranged between the hauler and the truck stop dealer. All or part of the items in this service can be used. (See page 144.)

7. General Trip Record of Data and Costs—has been designed for the purpose of permitting a study and follow-up of average trip costs for a selected number of destination points. With this kind of information on hand, the expense tally sheets of each driver for any trip can be quickly checked on the spot. However, it must be kept in mind that these would not include tire repairs, vehicle repairs, etc., since the purpose of this procedure would be to effect economies directly and immediately in over-the-road daily expenses and other costs at truck stop outlets.

8. Suggested Instructions to Drivers—which may be used in whole or in part at discretion of the hauler.

9. (a) Road Maps—on which have been spotted truck stops and outlines of indicated routes of travel. These maps are the control center for obtaining routings to be followed by drivers, locating truck stops at points where purchases are to be made, and determining mileages between fueling points in cases where they are not specifically indicated.

(b) Truck Stop Cards—(Fig. 3) showing information on the truck stop locations spotted on the maps. Drivers are usually instructed to advise the dispatcher of changes in the services and operation of truck stops as observed in their daily routine so that the dispatcher can keep these cards strictly up-to-date regarding dealer's name, hours of operation, facilities, etc. It may be found convenient to use the reverse side of each card for special comments of importance, such as commitments by dealers, volume of purchases, etc.

(TURN TO PAGE 140, PLEASE)

**ONE MAN . . .  
AND A  
BRADEN WINCH**



Pictured here is one man and a BRADEN WINCH doing an efficient job of pole setting. The controls are placed so that the operator can see the pole and keep the load under perfect control. This is another example of the adapting of a BRADEN WINCH to specific handling jobs. Let us know your handling problem and we will show you how a BRADEN WINCH can be used to solve it.

Write for complete information

**BRADEN WINCH COMPANY**

P. O. Box 547, Broken Arrow, Oklahoma



All eighty units in the  
Pontiac Auto Transport Company  
Fleet are fully equipped with  
**WAGNER AIR BRAKES**



## "Wagner Air Brakes save us real money!"

SAYS CARL COPELAND, GENERAL MANAGER OF PONTIAC  
AUTO TRANSPORT COMPANY, BUFFALO, N. Y.

Because of their unusual dependability, Wagner Air Brakes are the first choice of large fleet operators everywhere—Operators who know that expensive rolling stock and valuable payloads must be protected if operations are to be safe and profitable.

One of the outstanding features of Wagner Air Brakes is the famous Rotary Compressor. Known for its troublefree operation, it utilizes the rotary system assuring an abundance of smooth flowing compressed air at all times. For real brake economy equip your fleet with Wagner Air Brakes—or when ordering new vehicles specify WAGNER.



**WAGNER AIR BRAKE USERS ARE OUR BIGGEST BOOSTERS**

### Wagner Electric Corporation

6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.  
(Branches in Principal Cities in U. S. and in Canada)

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID ... NoRoL ... CoMaX BRAKE LINING ... AIR  
BRAKES ... TACHOGRAPHS ... ELECTRIC MOTORS ... TRANSFORMERS ... INDUSTRIAL BRAKES



#### Pontiac Auto Transport Company

928 Fuhrmann Boulevard • Buffalo 3, N. Y.  
WCodeen 3012

September 9, 1952

Wagner Electric Corporation  
6400 Plymouth Avenue  
St. Louis, Missouri

Gentlemen:

Our experience with Wagner Air Brakes here at Pontiac Auto Transport Company has been completely satisfactory. They have saved us real money.

We have experienced a substantial reduction in both engine and brake maintenance costs on the eighty units which are fully equipped with Wagner Air. We're quite happy about the fact that many of our Wagner compressors have been in service on as many as 3 and 5 trucks needing nothing more than a checkover between installation—some of these "pumps" have been in service over 5 years.

We thought you would be interested in our experience—certainly any new units we add to our operation will be equipped with Wagner Air Brakes.

Sincerely

PONTIAC AUTO TRANSPORT COMPANY

*Carl Copeland*  
Carl Copeland  
Gen'l. Mgr.

CC:teb



## ... Plan Aids Motor Carriers

Continued from Page 138

For haulers who travel irregular routes and do not dispatch schedule trips from any particular point of origin, the oil company will furnish a list of indexed truck stop dealers, arranged by states. These listings are prepared in a durable spiral bound Truck Stop Handbook for issue to each driver. The Handbook may also include

TABULATION OF ROUND TRIP MILEAGES AND MOTOR FUEL CONSUMPTION

135-GALLON CAPACITY UNITS (Av. 5 miles per gallon)

| Round Trip<br>Mileage | Round Trip*<br>Gallons | Round Trip<br>Mileage | Round Trip*<br>Gallons |
|-----------------------|------------------------|-----------------------|------------------------|
| 650                   | -                      | 905                   | 51                     |
| 655                   | -                      | 910                   | 52                     |
| 660                   | -                      | 915                   | 53                     |
| 665                   | -                      | 920                   | 54                     |
| 670                   | -                      | 925                   | 55                     |
| 675                   | 5                      | 930                   | 56                     |
| 680                   | 6                      | 935                   | 57                     |
| 685                   | 7                      | 940                   | 58                     |
| 690                   | 8                      | 945                   | 59                     |
| 695                   | 9                      | 950                   | 60                     |
| 700                   | 10                     | 955                   | 61                     |
| 705                   | 11                     | 960                   | 62                     |

\*Mileage in relation to tank capacity is figured to allow for an excess of 5 gallons of motor fuel in tank at completion of trip, assuming tanks are full at start of trip. This allowance is made in order to meet emergencies such as snow, ice, congested traffic conditions, gas line break, etc.

Fig. 4. Fuel consumption is estimated, purchases controlled using this form

a section on the trucking company's rules and regulations and other desired directives. Also, irregular operations that have a heavy frequency of movements from specific terminals to various destinations may have complete routing information included in the Handbook for use on such trips.

### Special Features of Plan

THE main purpose in preparing this system is to accomplish certain economy features that would fit into the hauler's present method of operation. Through use of dispatching slips it is possible to definitely control fuel purchases by predetermined gallonage for each and every strip at selected truck stops. There is no guesswork. There is no driver-handling of cash nor must the driver make decisions on how many gallons of fuel to buy. Control of purchases is placed in the Dispatcher's hands. Better buying methods and habits are developed. When desired, purchases of petroleum products may be made through use of a blind credit number. Under the Special Authorized Credit Plan the account is given a credit number which is posted at each truck stop designated by the hauler, and it is unnecessary for drivers to carry credit cards with them.

### How the System Works

IN ORDER to further exemplify one type of Motor Carrier Service Plan operation, let us study the following case:

A dispatcher in Louisville, Ky., wishes to send a unit to Miami, Fla. By referring to the tabulation "Motor Fuel Purchase Control" showing destination points in the State of Florida (item 3 above), he will note that the round trip distance between Louisville and Miami is 2246 miles and that a total quantity of 449 gallons of fuel would be consumed in this particular vehicle on the trip. The dispatcher has elected to use a 135-gallon capacity unit (TURN TO PAGE 144, PLEASE)



**LIFT**  
"UNDER-CAR"  
REPAIR-JOBS TO  
THE BEST WORKING  
HEIGHT WITH THE  
**NEW..... HOMESTEAD HOISTER**  
(By the Makers of Hypressure Jenny)

### SAVE UP TO 50% OF MECHANICS' TIME and WAGES ON UNDER-CAR REPAIR JOBS

Garage, fleet and service station mechanics work faster and more efficiently when they are not forced to hunch, crouch, or lie on their backs in uncomfortable working postures. With the new, automatically safety-locked, air-operated HOMESTEAD HOISTER, a car or truck can be instantly raised and securely held at the most convenient working height for any "low-down" or under-car service. As a result, repair time and labor costs are reduced and profits increased.

To prove it, we will gladly arrange for a demonstration in your shop. Write today for complete information and address of nearest jobber.



ILLUSTRATED FOLDER AND PRICES ON REQUEST

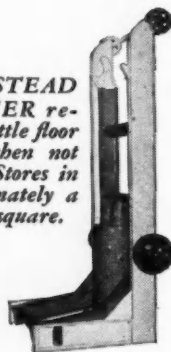
**HOMESTEAD VALVE MANUFACTURING COMPANY**

"Serving Since 1892"

P. O. BOX 90

CORAOPOLIS, PA.

HOMESTEAD HOISTER requires little floor space when not in use. Stores in approximately a 30-inch square.



# Chlorophyll Cutter...

Here's the greatest grass cutter of them all. It mows, chops and blows the alfalfa into this special trailer at the rate of 50 acres a day.

From this alfalfa comes chlorophyll—the breath and body deodorant which has become such a national favorite.

"Doc" Dunn of Borbein, Young and Company, Budd distributor in Wichita, told us about this behemoth which is operated by Bert & Wetta Company of Maize, Kansas. At Borbein, Young's suggestion, it was changed over to Budd disc wheels with wide base rims. Since the change-over, the rig is actually "light-footed". Because of the light load per square-inch of tire on the ground, the plants are not mashed and torn as before.

Bert & Wetta manufacture and sell these machines, and also operate a number on a contract basis.

On and off the highway—wherever there's a motor-driven commercial vehicle—the chances are that modern Budd steel disc wheels can mean savings and better operation.

Greater tire mileage, by far . . . lower wheel breakage . . . better handling even under the most severe conditions. Your Budd wheel distributor below will be glad to survey your equipment, whatever it is. It won't cost you a cent—and it may save you dollars!

THE BUDD COMPANY, Detroit 15

**Budd**

LOS ANGELES—Wheel Industries, Inc.  
LOUISVILLE—Auto Wheel & Rim Service  
LUBBOCK—Southwest Wheel, Inc.  
MEMPHIS—Beller Wheel, Brake & Supply Co.  
MILWAUKEE—Stone Manufacturing Co.  
MOLINE—Mutual Wheel Co.  
NASHVILLE—Beller Wheel, Brake & Supply Co.  
NEWARK—Automotive Safety Inc.  
NEW HAVEN—Connecticut Wheel & Rim Co.  
NEW ORLEANS—Southern Wheel & Rim Co.  
NEW YORK—Wheels, Incorporated  
OKLAHOMA CITY—Southwest Wheels, Inc.  
OMAHA—Morgan Wheel & Equipment Co., Inc.  
PEORIA—Peoria Wheel & Rim Co.  
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.

PITTSBURGH—Wheel & Rim Sales Co.  
PORTLAND—Six Robbles', Inc.  
PROVIDENCE—New England Wheel & Rim Company  
RALEIGH—Carolina Rim & Wheel Co.  
RICHMOND—Dixie Wheel Co., Inc.  
ROCHESTER—Frey, the Wheelman, Inc.  
SALT LAKE CITY—Henderson Rim & Wheel Service  
SAN ANTONIO—Southwest Wheel & Equipment  
SAN FRANCISCO—Wheel Industries, Inc.  
SEATTLE—Six Robbles', Inc.  
SOUTH BEND—Wire & Disc Wheel Sales & Service  
SPOKANE—Bearing & Rim Supply Co.  
SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.  
SPRINGFIELD, MO.—Borbein, Young & Co.  
ST. LOUIS—Borbein, Young & Co.  
ST. PAUL—Wheel Service Co.

SYRACUSE—Colbourn Wheel & Rim Service, Inc.  
TACOMA—Six Robbles', Inc.  
TOLEDO—Wheel & Rim Sales Co.  
WICHITA—Borbein, Young & Co.  
WINSTON-SALEM—United-Automotive Service

## EXPORT

CLEVELAND—C. O. Brandes, Inc.

## CANADA

CALGARY—Mutual Supplies, Ltd.  
EDMONTON—Alberta Wheel Distributors, Ltd.  
MONTREAL—Auto Wheels & Supplies, Ltd.  
TORONTO—Wheel & Rim Co. of Canada, Ltd.  
VANCOUVER—Wheels & Equipment, Ltd.  
WINNIPEG—Ft. Garry Tire Service Ltd.

## ...Plan Aids Motor Carriers

Continued from Page 140

and notes that a total of 319 gallons of fuel must be purchased at truck stops. He then refers to the Tabulation of Round Trip Mileages and Motor Fuel Consumption (Fig. 4), from which it can be seen that the equipment can travel a maximum distance of 670 miles from Louisville before running out of fuel. Inasmuch as the round trip mileage is 2246 miles, the Dispatcher can

\* SUGGESTED \*

DAILY PM - SAFETY ROAD CHECK REPORT

\* SAMPLE \*

\* FORM \*

\*\*\*\*\*

- DRIVER'S VEHICLE CHECK -

(All Vehicles (if operating) Must Be Checked Daily BEFORE 5:00 P.M. Standard Time)

\*\*\*\*\*

Leased Operator: Name \_\_\_\_\_ City \_\_\_\_\_

Agent Company: Name \_\_\_\_\_ City \_\_\_\_\_

Date \_\_\_\_\_, 19 \_\_\_\_\_ Time \_\_\_\_\_ Report No. \_\_\_\_\_

Tractor No. \_\_\_\_\_ Trailer No. \_\_\_\_\_ Origin \_\_\_\_\_ Destination \_\_\_\_\_

Speedometer Reading: Now \_\_\_\_\_ Last Report \_\_\_\_\_ Miles Traveled \_\_\_\_\_

Explain any emergencies since last Report: (Such as: tire changes - damage to equipment - accidents - mechanical defects - unusual delays - etc. - give details of each: \_\_\_\_\_)

Fig. 5. Owner can supply truck stop with forms, arrange for daily PM check

If you do  
**ENGINE REBUILDING**  
you will want this  
**USEFUL BULLETIN...**

**HYDRO-BORER**

**FOR ENGINE REBUILDING**

**Fast Precision Boring**  
**... Quick, Easy Set-ups**

**YOURS**  
**WITHOUT**  
**CHARGE**

**SEND TODAY!**

See for yourself how you can profit from these HYDRO-BORER benefits:

- New Chatterless Feed Principle
- Automatic Center-to-Center Accuracy
- Time-Saving Set-up

HYDRO-BORER CO., Dept. 10  
1601 E. Olympic Blvd., Los Angeles 21, Cal.

Send me my free copy of "HYDRO-BORER for ENGINE REBUILDING":

Name \_\_\_\_\_

Co. \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Our engine rebuilding includes: ☐ Diesel ☐ Gasoline ☐ Both

select any designated truck stops along the routing where the driver purchases fuel totaling 319 gallons for the round trip. The equipment will return with the 135-gallon tanks almost empty. Note that an allowance of 5 gallons has been provided for emergency purposes in computing the gallonage required for any round trip.

The driver, when making fuel purchases at designated truck stops, merely presents his Authorization for Purchase slip showing the gallonage to be delivered, but he retains the slip. The attendant, after making deliveries, fills out a receipt in the usual manner, giving the driver one copy and retaining one copy to be sent through for billing. In this case, a Special Authorized Credit Number was established at such stops. The credit number is placed on the fuel receipt by the service station attendant, who completes the receipt in accordance with instructions previously forwarded to the dealer by the hauler. When the driver returns and checks-in, he should turn in his Authorization slips and purchase receipts. These receipts should conform to the authorizations that were given by the dispatcher.

It should be remembered that this is just one example. In cases where regular routes are established, instructions would normally be given for the purchase of a specific number of gallons at selected stops. In cases where extended irregular routes are involved and many stops are necessary, the driver may be instructed to fill the tank at all stops except the last one where a predetermined number of gallons would be purchased to bring the truck in with approximately five gallons in the tank.

Probably the most important feature of the entire Plan is its flexibility, permitting individually tailored Plans for each company requesting Gulf's cooperation.

What does it cost? Nothing!

END

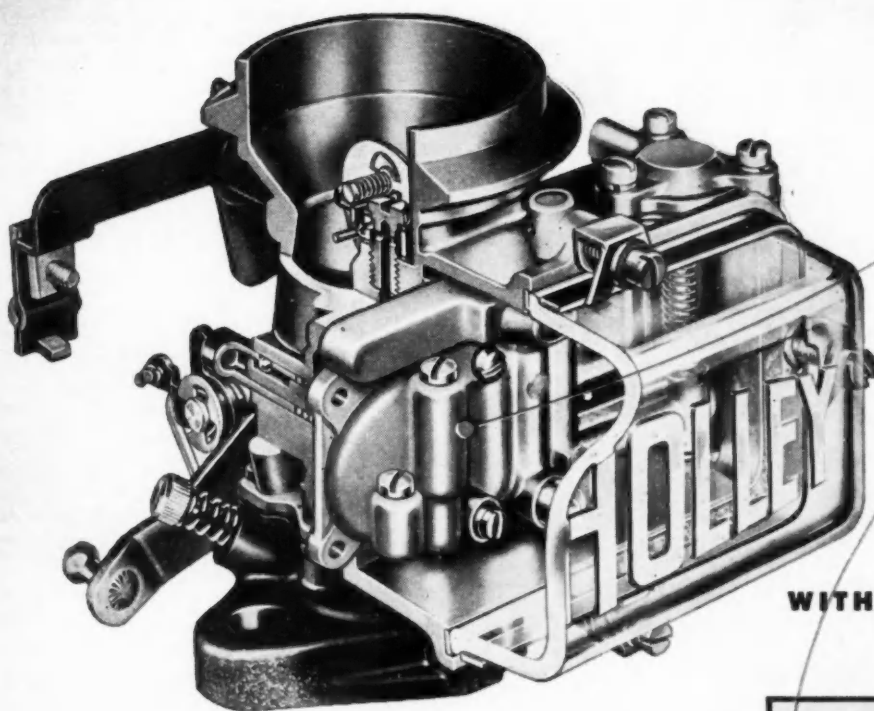
Please Resume Reading Page 80

COMMERCIAL CAR JOURNAL, June, 1953

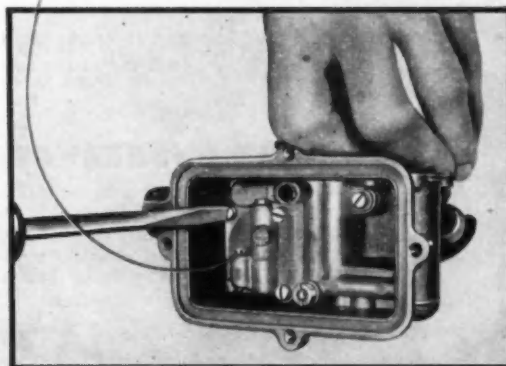


THE NEW CARBURETOR FOR LIGHT TRUCKS

# The Holley Visi-Flo



WITH THE REPLACEABLE  
METERING UNIT



In the past, service departments of car and truck dealers have had to maintain cumbersome stocks of tiny carburetor parts. Vehicle manufacturers have urged servicemen not to patch up old carburetors or to replace them with rebuilt models but to buy and install new factory-built carburetors. Owners of cars in the low priced field have protested that it will cost too much.

## The Holley Visi-Flo will change that!

Servicing the Holley Visi-Flo requires just four simple steps. For the first time, all metering parts are contained in one complete assembly which can be easily, quickly, and inexpensively replaced. The Visi-Flo is Holley Model 1904. It is a single downdraft carburetor for 80-120 H.P. engines.

FOR MORE THAN HALF A CENTURY—ORIGINAL  
EQUIPMENT MANUFACTURERS FOR THE  
AUTOMOTIVE INDUSTRY

**HOLLEY**  
*Carburetor Co.*

DETROIT 4, MICHIGAN

L-14

# There's Not Much Excuse for Vehicle Fires

Continued from Page 75

bration shook the connection loose. A little detective work beyond merely repairing the hazard usually turns up the cause for the defect and that cause usually can be easily corrected.

Carburetor backfires cause fires. But, if the carburetor works like the manufacturer says it should, what then? Here are some other points to check in tracing this hazard down; poor quality

fuel, too lean or too rich fuel mixture, intake manifold leaks, sticking distributor governor, incorrect ignition timing, preignition, faulty valve timing or sticking or improperly seated valves. If you have carburetor backfire, it may take a while to check all these possible causes, but it is easier than repairing or rebuilding a burnt-out engine.

Most fires resulting from traffic acci-

dents arise from a broken fuel supply line or a ruptured fuel tank. The shop can well say it can not be expected to build a tank and fuel line to withstand the beating they would take in a collision. On the other hand there are some things the shop can and should do to minimize the fire hazard from the fuel supply tank.

Routine checks for tank and line leaks should be made and be sure the tank is securely mounted. And, again, if there is a line leak or a broken mounting bracket, find out why. Brackets quite often work loose or crack due to strain when improperly mounted. Gravity feed fuel systems are a special hazard, and, where possible, fuel systems should be arranged to reduce the possibility of a gravity leak in case the fuel line is broken.

The revised ICC Safety Regulations make certain specifications for fuel tanks on vehicles subject to their control. Local and intrastate operators can reduce fire hazards in their vehicles by adopting these standards. But putting in safety tanks is not enough. PM checks on these tanks include making sure the vent mechanism is clean and in operating order. Be sure the fuse plug has not been replaced with a steel pipe plug, which happens quite often after steaming out the tank has blown the original plug.

With LP gas operation all these things apply and, in addition, there is the extra precaution necessary in maintaining a fuel system under pressure.

## Exhaust System

A HOT tailpipe too close to the flooring of a vehicle is another often neglected fire cause. Dragging tarpaulins or other flammable materials easily blaze up, ignited by hot exhaust. Check mufflers, tailpipe and other parts of the exhaust system for leaks. Be sure they have adequate ventilation space and are securely fastened. Look to see if there is any place where a good bounce on the part of the truck would bring them in contact with any sharp points; no sense in repairing a leak only to find another after the next trip is over.

A lot of brake fires start with poor maintenance. Loose brake linings, high rivet heads, unevenly seated blocks or out-of-round drums are typical brake fire causes, can be corrected in the shop. And keep out the dirt. Brakes operate on friction, are hot enough in normal operation without adding to the hazard. Brake fluid leaking on a hot drum can make a good fire, too.

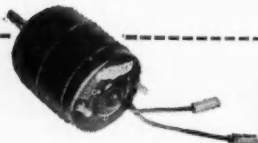
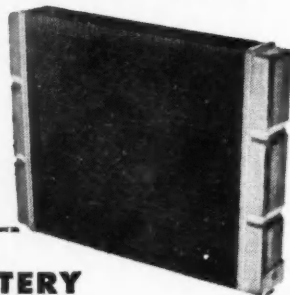
On air brakes, oil and grease from the compressor can and do get into the air line. The resulting restriction in the air flow can cause enough heat to ignite them. Stop it by keeping the air-

(TURN TO PAGE 148, PLEASE)

## EVANS BALANCED DESIGN and "Married" components deliver PLUS PERFORMANCE

### HEAVY DUTY CORE

is built to take full advantage of the water temperature and volume available in each individual vehicle. Air passages are designed for minimum pressure drop.

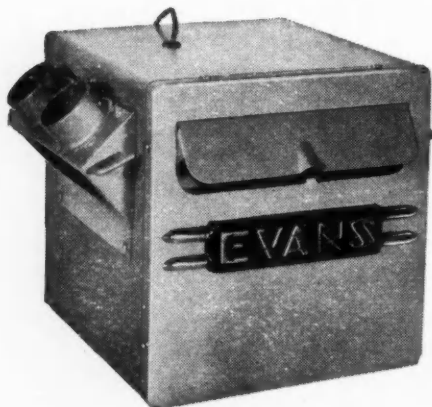
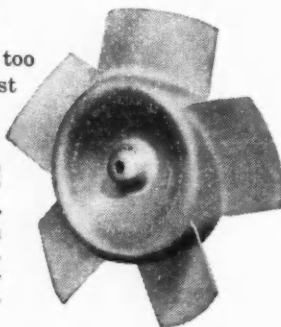


### LOW BATTERY DRAIN MOTOR

Specifically designed for each component—not too small, not too large . . . just right for highest efficiency.

### LIGHTWEIGHT UNBREAKABLE FAN

with precision die molded airfoil section blades moves maximum air with least noise and power consumption. Sturdy one-piece construction; nothing to loosen or get out of balance.



### EVANS HEAVY DUTY DEPENDABILITY IS WORTH DOLLARS TO YOU

You can count on installing Evans high performance heaters . . . then forgetting them, year after year. Designers, fleet operators, drivers, mechanics . . . all know that the Evans nameplate on custom heating and ventilating equipment is their assurance of dollar-saving dependability. Evans Products Company, Heating & Ventilating Division, Dept. Q-6, Plymouth, Michigan.

... **EVANS** ... **BALANCED HEATING & VENTILATING CUSTOM HEATERS** ...  ...  
FOR EVERY TRUCK AND BUS

**FOR GREATER SAFETY**

**VICKERS**

*Greyhound Specified*

**HYDRAULIC POWER STEERING**

**on 400 New Coaches**



Always searching for ways to further increase passenger safety, Greyhound Lines selected Vickers Hydraulic Power Steering for the 400 new Model PD-4104 GM Coaches recently purchased.

Vickers Hydraulic Power Steering prevents the possible loss of driver control when a vehicle is forced off the pavement onto a soft shoulder . . . or when a front tire blows out. Extra steering power and quick maneuverability are always available for emergency conditions.

The Vickers System absorbs all road shock and transmits it to the vehicle frame . . . there can be no kick-back at the

steering wheel. The driver supplies only enough effort to slightly move a servo valve . . . fatigue is thus greatly reduced and the driver is more alert.

Only minor alterations are usually required to incorporate Vickers Hydraulic Power Steering in new and existing vehicle designs. For further information, ask for new Bulletin M-5104.

**VICKERS Incorporated**

DIVISION OF THE SPERRY CORPORATION

1418 OAKMAN BLVD. • DETROIT 32, MICH.

Application Engineering Offices: ATLANTA • CHICAGO (Metropolitan)  
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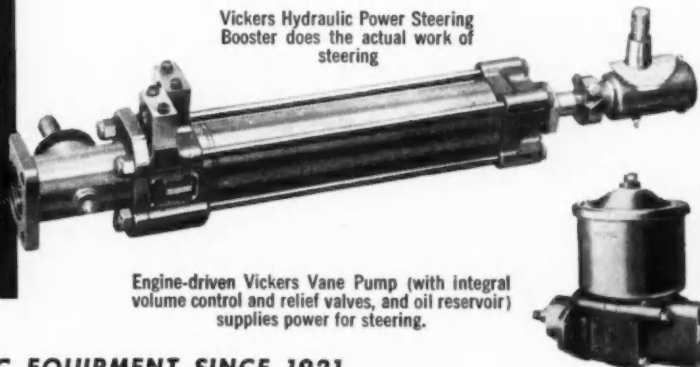
**VICKERS** hydraulic  
**POWER STEERING**  
is Effortless  
Positive and Shockless

6231

**ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921**

COMMERCIAL CAR JOURNAL, June, 1953

Vickers Hydraulic Power Steering  
Booster does the actual work of  
steering



Engine-driven Vickers Vane Pump (with integral  
volume control and relief valves, and oil reservoir)  
supplies power for steering.



## ... Vehicle Fires

Continued from Page 146

lines open and clean and reduce the chances of clogged airlines by keeping the compressor in good operating order.

Most tire fires can not be put out with the capacity of the usual extinguisher carried on trucks. A strong reason for an effective tire PM program. Properly matched duals, correctly inflated tires, replacement of those with slow leaks will minimize the heat built up by the

continuous flexing of the tire in operation.

### Non-Mechanical Causes

**F**IRES that arise from non-mechanical and non-traffic accident causes are often the result of carelessness. Smoking hazards have been discussed above. Arson and vehicle fires resulting from the spread of some other fire can largely be prevented by parking trucks in protected areas away from fire hazards and strangers. Trash and litter along with oil or grease account for most spontaneous combustion fires. An

emphasis on keeping things clean will prevent most of these. In some cases, leaking cargo will combine with other cargo to ignite in this manner. Loaded correctly it should not happen. If possible, separate such cargo into two different trucks. Static electricity hazards should not be overlooked. Most trucks generate some, but, if the amount becomes excessive it is a fire hazard and the cause should be located and corrected. Tank trucks and others that normally carry flammable products usually should have grounding straps or chains.

Good material on the prevention of commercial vehicle fires can be obtained from the National Fire Protection Assn., 60 Batterymarch St., Boston 10, Mass. Included are the following pocket-sized manuals available at the prices indicated:

Truck Fire Protection, Recommended Good Practices, June, 1952, No. 512, 25¢.

Standards for Fire Protection and Prevention in Transit Operations, October, 1952, No. 83, 50¢.

Standards for the Storage and Handling of Liquefied Petroleum Gases, June, 1952, No. 58, 35¢.

Recommended Regulatory Standard for Tank Vehicles for Flammable Liquids, 1948, No. 385, 25¢.

Fire Safety in Tank Truck Design, Jan., 1952, No. Q 45-12, 50¢.

END

Please Resume Reading Page 76

FATTY FLOORBOARDER, OUR BIG-FOOTED TRUCK JOCKEY, SAYS THAT EVEN THOUGH A GIRL CAN'T BE READ LIKE A BOOK, IT SURE IS FUN TO THUMB THE PAGES.

### Mobile Training School



One of the new GMC mobile hydraulic service training schools sent out on a nation-wide tour by GMC Truck & Coach Division to train dealer and operator mechanics on hydraulic truck transmissions. The school has four-day courses, and is complete with all sorts of special training equipment under the direction of a factory-trained instructor.

COMMERCIAL CAR JOURNAL, June, 1953

use only  
**FACTORY NEW  
GENUINE  
BENDIX DRIVES  
and  
PARTS!**



Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix\* Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 85,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

\*Reg. U.S. Pat. Off.

**Bendix Drive**

ECLIPSE MACHINE DIVISION of  
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Ave., New York 11, New York



# Allied Van Coordinates Scattered Team

Continued from Page 77

household goods. Since the new headquarters is located in the suburban area of Chicago, it has become unnecessary in most cases for large long distance vans to cope with congested city traffic. Local vans can pick up individual shipments and unload them at the terminal for consolidation on long distance vans. Another important advantage is that long distance vans coming into the new terminal can transfer shipments in accordance with the proper destination. In other words, a van destined for New York but carrying a shipment for New Orleans can drop off the New Orleans shipment for transfer to a van destined for the South.

An added special feature of our new headquarters in Broadview is a roomy second-story section over part of the main loading dock, to provide sleeping and recreation facilities for van drivers. This includes 17 two-bed private sleeping rooms with adjacent lockers, showers and large recreation room.

Recently, about one-half of the shipments being serviced at the new Broadview terminal facility were either from or to the 27 Chicago AVL agents. But at the sleeping quarters there is often an over-night guest list of 25 or more drivers from the Pacific and Atlantic shores and the deep South.

One special terminal convenience for all coming and going vans is an outside weighing scale which is located at the edge of the driveway past the end of the main office building. The weight-recording unit for these scales has been extended upward into the end of our communications room on the second floor.

The communications room, open nine hours a day, has Western Union service plus three teletype lines for communication with all agents who also have teletype. In addition, there is leased line service to Atlanta, Ft. Worth, New York, and other AVL offices. We are now urging our agents to have their own respective teletype machines to speed and simplify communications between offices.

Other chief departments in our headquarters office are dispatching, with tiers of visible files; a special IBM Room; a mail room and an accounting room. To facilitate operations, the State Permit department is adjacent to dispatching.

## Better Driver Relations

THE SECOND chief objective pertains to better driver relations which, we feel, can only be achieved by work-

ing more closely with the men and making a careful study of their problems. Our company's attitude toward its drivers may be summarized as follows:

"The human element of any operations plan is the van driver. He is the custodian of valuable investments in equipment, sales effort, claim prevention and public and customer relations.

He is the out-of-town purchasing agent of labor, materials, repairs, gasoline, oil, etc. He represents the carrier in complying with federal, city and state regulations. Van drivers are an integral part of successful dispatching."

In the field of driver selection and training, Allied and its agents have rather thorough programs for the pre-employment "verification" of all new drivers before hiring.

To keep drivers well informed, the official AVL "Driver's Manual," is now being generally promoted. The manual (TURN TO PAGE 152, PLEASE)

# for greater safety



## tripled light from new K-D rear lites

To meet the need for greater safety from more light from rear signals on heavy duty units . . . trucks, buses, tractors, trailers . . . K-D engineers have developed an entirely new lens. Its light output is three times that of the old KD 200! By overall semaphore prism arrangement, light comes from the entire lens instead of from only the bulls-eye. Both the KD B200 and the new KD B201 Stop and Rear Lites have this lens. Both have heavy Bonderized steel construction . . . 4 1/8" diameter . . . 2 5/8" depth . . . removable plug assembly including pigtailed ready to splice . . . and 21-3 cp bulb.



KD B201



KD B200

KD B201 has universal mounting . . . slotted bracket fits all bolt centers.

KD B200 mounts on two 1/4" bolts spaced 2" apart. KD 249 license bracket is available at extra charge for use with KD B200 for license bracket mounting.

## more safety for light trucks, too



KD 255

There's high light intensity from the 4" Red "STOP" lens of two new K-D Saftee Stop Lites. Black letters with highlighted bead on red field. Exceed ICC and SAE specifications. Glass lens held in place by steel door . . . easy to change 21 cp bulb. Well proportioned to vehicle size . . . Heavy duty Bonderized steel construction . . . black enamel finish.

KD 255 Bracket mounting. Modern streamlined design. Silver-plated reflector. Wire extended through hollow stud facilitates mounting.

KD 255F Flush mounting. Completely enclosed housing protects silver-plated reflector, connector and wire assembly. Minimum depth flange.

# K-D LAMP COMPANY

1910 ELM STREET • CINCINNATI 10, OHIO  
WAREHOUSES: CHICAGO • LOS ANGELES • NEW YORK



"Uni-Pak" is THERMO KING's name for its patented single package truck refrigeration unit . . . designed for quick, easy installation, or removal.

"Uni-Pak" eliminates individually mounted elements and refrigerant connection lines. And, "Uni-Pak" also means quick interchange of units. This exclusive feature, one of the several exclusives on THERMO KING units, gives you greater dependability, reduced maintenance and increased efficiency.

THERMO KING's direct-driven fan eliminates the need for separate electric fan motors.

## "Uni-Pak" is exclusive with **THERMO KING** TRANSPORT REFRIGERATION UNITS

### EXCLUSIVES!!



- Combination starter-generator. Stop-start engine operation.
- Fully automatic hot-gas defrost.
- Counter-flow cooling coil.
- Uni-Pak—Single package unit.
- Nation-wide, Factory Trained Service.

#### U. S. THERMO CONTROL CO.



World's Largest Builder of Gasoline Engine Powered Refrigeration Units.



Sales and Service in  
All Principal Cities

#### MAIL THIS COUPON TODAY

U. S. Thermo Control Co.  
44 South 12th St., Minneapolis 3, Minn.

Gentlemen: Please send immediately complete information regarding Thermo King mechanical Refrigeration for trucks and trailers.

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## Allied Van . . .

Continued from Page 151

is in loose-leaf form, to permit easy page insertion changes. In its present form, it includes the following 13 subject headings:

- General Rules and Regulations.
- I.C.C. Rules and Regulations.
- Claims and S & D Reports.
- Dispatch Policy.
- AVL Office Directory.
- Drivers' Method of Reporting.
- How to Complete Shipping Papers and Distribute Them.
- Weighing.
- Packing.
- Loading.
- Method of Collection.
- Comprehensive Transit Protection.
- AVL Tariff Explanations.

Merit plans are now being set up for drivers and the chief respective bases for these plans will be "safety," "claim experience," and "communications."

### Incentive Plans

WE ARE also embarking on a uniform plan for general driver recognition. This especially has included a program for the presentation of service recognition pins to all AVL drivers. There has been general surprise by our headquarters management, at the fact that the company has so many drivers with long-time records for continuous employment. To date, we have given out a total of 599 service pins. This includes 193 for one year; 169 for five years; 78 for ten years; 60 for 15 years; and 59 for 20 years.

This program also includes urging drivers to compete for annual safety awards, coming from three general sources—National Safety Council, American Trucking Associations, and insurance companies.

In studying the problems of drivers in AVL service, practical methods for the control of gasoline purchases, driver selection and training, and safety information have been instituted. As a result, several new procedures have been put into use. New forms have combined two or more old ones, or have been shortened without eliminating vital information.

Information of all types directed to the drivers is now being sent to their homes. This includes safety news, letters, bulletins, commendations, and awards.

### Standardized Records

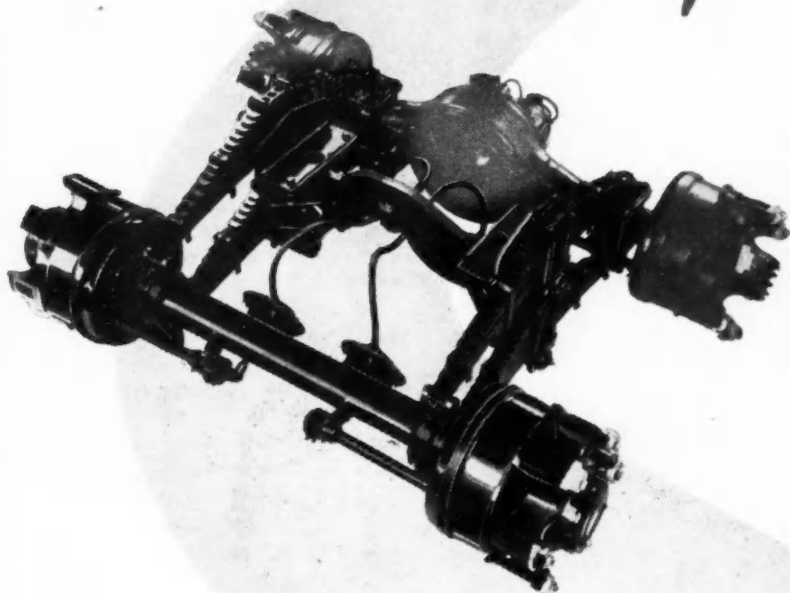
ANOTHER of the new driver-recognition activities now being promoted among our agents is the general use of "complete" driver's record forms.

(TURN TO PAGE 154, PLEASE)



The GRICO

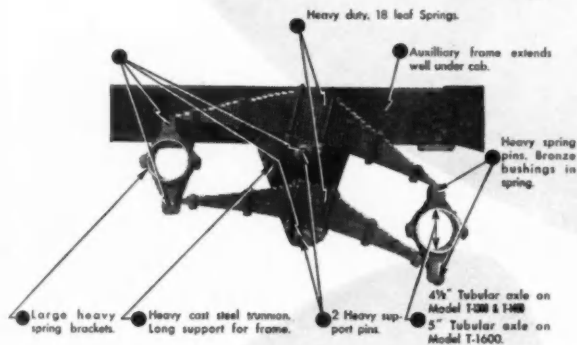
*Super-flex*



The SIMPLICITY OF CONSTRUCTION and the effectiveness of operation make the Super Flex 3rd Axle TOPS in the trucking field from the standpoint of low cost maintenance and efficiency. The GRICO Super-Flex can be transferred easily from one vehicle to another as a truck wears out or becomes obsolete.

Your trucks may be doing a good job now, but watch your profits soar once you have equipped them with Super-Flex 3rd Axles. We say this because we have hundreds of letters from truck and fleet owners telling us that the GRICO Super-Flex has meant better and more economical service through . . . more maneuverability . . . greater fuel savings . . . better weight distribution . . . added payload . . . longer tire wear . . . increased safety . . . and low maintenance.

Your GRICO Super-Flex 3rd Axles are scientifically engineered and ruggedly built to give you long years of economical, trouble-free service. Just check the advantages of the Super-Flex and you'll agree that it's the only trailing axle for your trucks. Look to Grico for the advanced in engineering and feel confident that with the Grico Super-Flex you'll be on the road to higher profits with the finest unit of its kind in the world.



## *Easily Changed*

If the nature of your trucking changes, Super-Flex can be transformed into a Grico 2-Axle Drive at a very nominal cost and a minimum of lost time.

# GRICO *Dual Axle* UNIT

Convert your present single-axle trailer to a dual-axle job. Haul the maximum pay-load and cash in on advantages never before obtainable. **LOW MAINTENANCE . . . LIGHT-WEIGHT CONSTRUCTION, YET DURABLE . . . LONGER TIRE WEAR . . . PERFECTLY CONTROLLED BRAKE TORQUE WHICH ELIMINATES CHATTERING.** Yes, truly this Dual-Axle Unit will increase your profits and assure longer, more satisfying service.

Get your Dual-Axle by Grico now. It's easily and quickly done and will permit you to haul the maximum load with long trouble free operation.



FOR ADDITIONAL INFORMATION AND PRICES, WRITE

**GRICO TWO AXLE DRIVE COMPANY**

19840 W. EIGHT MILE ROAD  
DETROIT 19, MICHIGAN

## Allied Van . . .

Continued from Page 152

This provides for the entry, on an individualized report form for each driver, of all personal items, both favorable and unfavorable. This would mean an up-to-date office record of all letters commending a driver, and an entry to indicate that the letter was mailed to the driver's home. Most of all, there would be direct mailings from the office to indicate to the driver that such fav-

orable commendations, etc., had been noticed by the company headquarters.

To make the record complete, it is also planned to include such unfavorable factors as rules violations, chargeable accidents, "claims records" against the driver; and to include brief listings of "missing items," "exterior damage," "concealed damage," "mechanical damage." Likewise, space for "date of last physical examination," "date employed," and "date terminated" would be included on the record. Such a record, also, could be closely related to the company's special file on "claims," and

be of cumulative value in the total company program for claims control.

### Observation Reports

FOR the past two years Allied Van Lines has subscribed to a plan operated by the Movers Conference of America. This plan is designed to establish on-the-spot road checks whereby inspectors can report conditions, favorable or unfavorable, concerning both the truck and the driver. For this service we pay \$1.00 to the Movers Conference and the agent about whom the report is made pays another \$1.00.

This service thus has been made positive and very broad. Each report summarizes an observed appearance or activity by a specific van and may be either favorable or unfavorable, from the viewpoint of the public service. It might mention the road speed of the vehicle, its general appearance, whether a passenger was riding with the driver, whether the driver was careful or reckless; or if being loaded or unloaded, the appearance and activities of the driver and helpers.

This service is closely related to another AVL activity, likewise started two years ago. This was the nation-wide inspection of all equipment in operation by our agents, designed to help achieve uniformity in the appearance and maintenance of our equipment.

Used at that time was a "driver's inspection report" form which included the three features of "inside equipment" with 18 items; "painting and lettering"; and "driver inspection."

Since that time, these AVL blanket inspections have been repeated, with the latest reported results of "large improvements" toward meeting AVL standards.

Equipment upkeep, of course, is closely related to the customary "preventive maintenance" checks in general AVL use. Our standard PM inspection for all long-distance equipment is at 20,000 mile frequency. This includes a total of 57 check items, supplemented by special group statements to summarize "repairs required," "material used—repair parts," and including the requirement need in "exchange units."

### Claim Prevention

THE THIRD chief objective involves claims and claim prevention. In our claim prevention section we continuously carry on research with the large manufacturing concerns or agents, and other modes of transportation, in their handling of various items of household goods, including mechanical items or fragile pieces, and their recommendations for safe handling. From this research bulletins are developed and sent

(TURN TO PAGE 158, PLEASE)

**KEEPS  
TIRES AIRTIGHT  
AT HIGH  
TEMPERATURES**

**HI-TEMP  
Heat-Resisting  
VALVE INSIDES  
AND CAPS BY  
DILL**

**PREVENTS COSTLY  
ROAD DELAYS . . .  
CUTS TIRE WEAR  
AND EXPENSE . . .**

Do you have tire pressure maintenance troubles caused by excessive tire heat? Equipping your tire valves with Dill HI-TEMPS will end this difficulty.

*Under abnormal hot tire temperatures, even up to 300° F. and more, the heat-resisting air seals of Dill HI-TEMP valve insides and caps maintain airtight security, without sticking.*

Tire engineers and fleet owners, everywhere, acclaim this modern Dill development. Dill HI-TEMPS will prevent costly road delays for you, cut tire wear and mileage expense. Buy this money-saving equipment from your wholesaler, tire or oil company, today.

**THE DILL MANUFACTURING  
COMPANY**

700 East 82nd Street  
CLEVELAND 3, OHIO



**No. 100-AH**  
Valve inside with special heat-resisting rubber seal in cup and on barrel.



**No. 632**  
Dome-type valve cap with swivel gasket of special heat-resisting rubber.



**No. 631**  
Hexagon-type valve cap with lead gasket mounted over brass sleeve.

**ORDER from your Wholesaler,  
tire or oil company.**

**DILL**  
**TIRE VALVE  
EQUIPMENT**  
*Standard of  
the Tire Industry*



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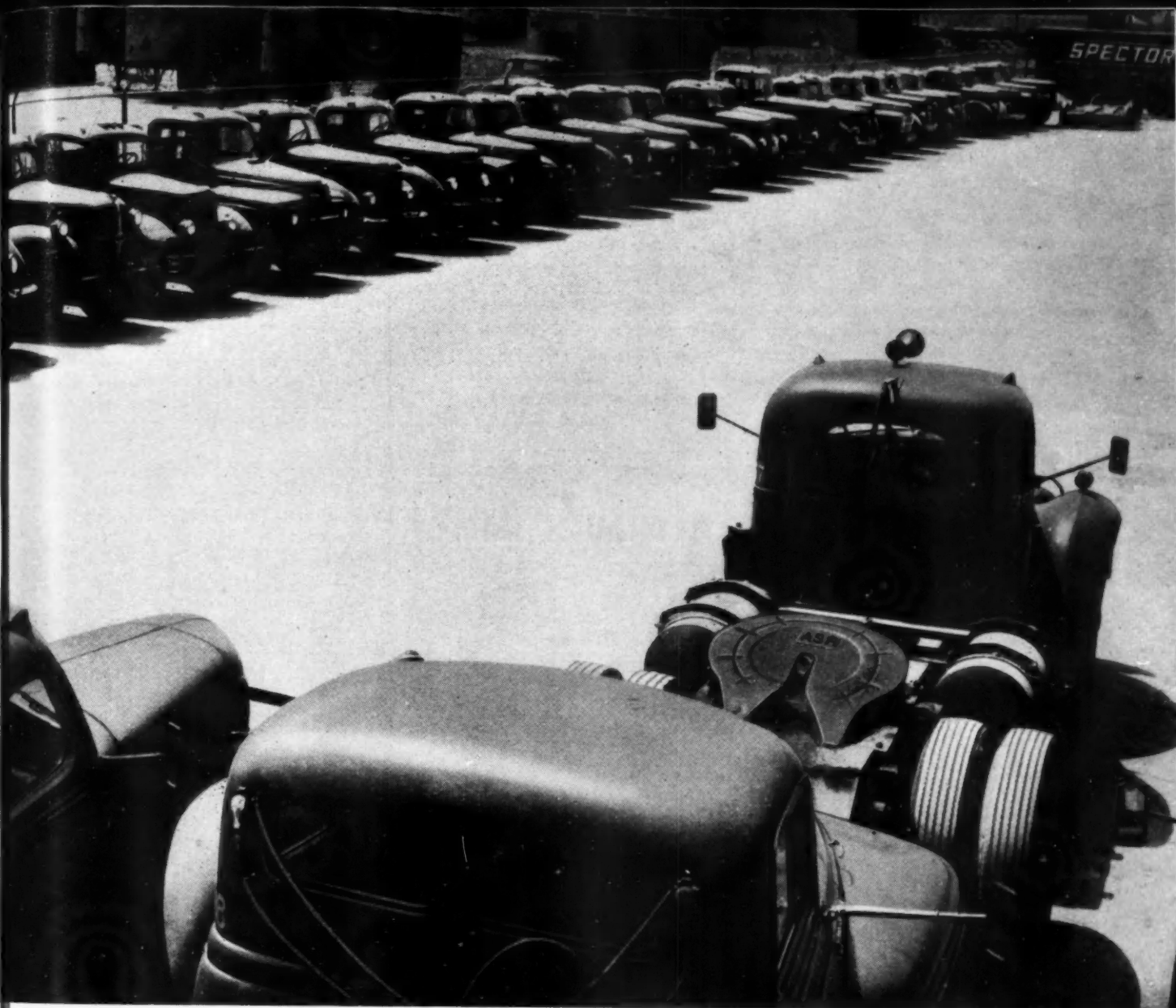
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## 80% of Spector's payloads are now hauled by ASF Safety 5th Wheels

And, some of the wheels on the tractors shown above have seen over 700,000 miles of service! Even so, Spector takes nothing

for granted. They try 'em all... and ASF Safety 5th Wheels continue to be specified as standard equipment.

# ASF Safety 5<sup>th</sup> Wheels



**A 3000-pound "compression-grip" saves your maintenance dollars...**

**COUPLING**—as the king-pin enters the jaws, the jaws are forced back against the exclusive ASF rubber buffer block, building up compression.

**COMPRESSING**—3000 pounds are built up before the lock clears the rear jaw, allowing it to snap to locked position.

**LOCKED**—and the jaws remain under compression. The grip is like a vise; eliminates the slack and backlash that can cost you money in added 5th wheel and king-pin wear.



**A quick glance tells you the lock is locked...**

**LOCKED**—as quickly shown by the lever and safety latch—which can *only be in these positions* when the jaws are truly locked.

**UNLOCKING**—with an easy twist of the wrist. Simply move the safety latch up, and pull and lever forward.

**UNLOCKED**—ready for uncoupling; parts in lockset position. *Handle can only move back to locked position when jaws are locked in next coupling operation!*



## Allied Van ...

Continued from Page 154

to the attention of AVL agents and every driver. One bulletin recently sent required more than a year of research among various industries.

An important phase of this program has been the set-up of our specifications of minimum requirements for properly equipped vans. This especially includes the recommendation that there be enough good, clean, strong pads.

Another feature has been our research tests to learn the exact causes of our claims. This requires that each claim in which the agent becomes involved should be thoroughly analyzed, for use in our consolidated monthly analysis report, sent out by our claims department to each agent, following the prompt report by the agent of their claims. In summary, it can be stated that in the eyes of the shipper, moving is a dramatic task and involves the handling of personal possessions.

END

Please Resume Reading Page 78

## Choose the Right Body Type

Continued from Page 81

Let's suppose that a firm has a fleet of 20 conventional panel trucks operating at peak efficiency to produce an average gross weekly volume of business of \$325 per truck for a total weekly fleet gross of \$6,500. A net profit of 2 per cent on gross volume is obtained. Drivers are paid a fixed weekly salary of \$75 and the total weekly volume of the fleet is fixed.

As an arbitrary figure, let's also suppose that by using man-high bodies the fleet can increase the efficiency of each driver by 12 per cent. (This is not an exceptionally high figure when it is considered that man-high bodies have greater capacity and are easier to work from than conventional panel trucks.)

With a fixed gross volume, the 12 per cent increase in driver efficiency means that fewer trucks are needed to handle the same amount of work. Actually, in this case it means that 18 man-high trucks would be used to do the same job formerly handled by 20 conventional panel units. There is a weekly saving in drivers' pay alone of \$150, equivalent to the profit on a gross business volume of \$7,500; not to mention the savings resulting from having to operate fewer trucks.

If it were possible to increase the gross volume, the fleet could handle a 12 per cent greater business volume with the same number of man-high trucks and drivers.

### Other Service

IN ADDITION to its use as a route truck, the stand-up panel has a great potential as a service vehicle for such operators as public utility fleets, plumbers, mobile lunchrooms, television service, domestic heating firms, highway transport operators, airfield service, etc. Just recently we visited a public utility fleet in the midwest which uses this type of body for gas meter servicing. From the company's early days it had been customary practice to use the standard panel truck for this work, but with the change to "man high" bodies twice as many meters could be carried on each trip, resulting in greatly increased efficiency in the service department's routine. Another utility firm is now using these bodies for inter-plant pick up and delivery service.

This type of vehicle is also turning in excellent work when used for such specialized applications as mobile work shops.

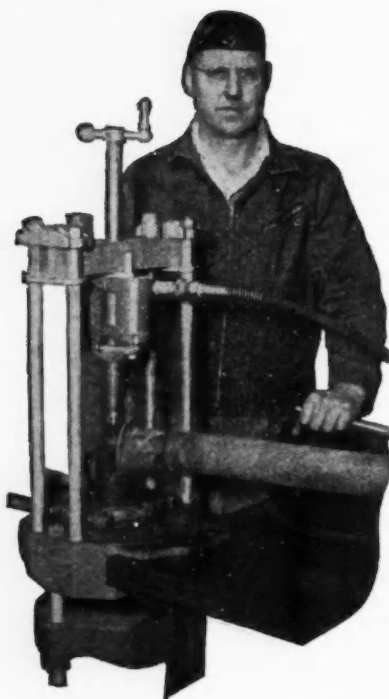
(TURN TO PAGE 160, PLEASE)

A TIP  
FROM  
*Elmer Lee*

"The OTC HYDRAULIC RAM  
and PRESS are  
the best buy  
I've ever made"



CENTER HOLE HYDRAULIC PULLER  
Makes Tough Jobs Easy



Elmer Lee owns a small garage.  
Does all types of automotive repair.

"I use the press every day for removing and installing gears, bearings, bushings, pins—I'm amazed at how often I use it.

"I do work on all makes of cars, trucks and tractors," says Elmer, "and the 17½ ton bench press and Power-Twin ram are the handiest, most versatile tools I've ever owned . . . couldn't have built one as well or as inexpensively myself."

You, too, can pull 95% of your jobs easily, quickly and without damage to expensive parts. OTC Power-Twin ram eliminates torque, reduces friction—use as portable puller or with open throat pedestal or bench press.

Famous OTC Center-Hole Ram . . . permits easy adjustment to the work and interchange from push-puller to sleeve puller to bench press . . . a portable power unit.

17½, 30 and 50 TON SIZES

POWER-TWIN  
has these advantages:

- Compact • Light • Universal
- Versatile • Portable • Powerful
- Interchangeable • Inexpensive

WRITE  
FOR  
FREE  
FOLDER

**OWATONNA TOOL COMPANY**  
341 CEDAR STREET • OWATONNA, MINNESOTA

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# The extra truck you need is as near as your telephone...

It's costly to have deliveries interrupted for want of a truck... costly both in money and customer good-will. Yet isn't it costly to invest in reserve trucks that are idle so much of the time? The smart alternative is to rent the extra truck you need from Hertz when you need it for just as long as you need it, and pay only as you use it. Gas and oil and Public Liability, Property Damage, Fire and Theft Insurance, and \$100.00 deductible collision protection are provided at no extra cost. In fact, everything is furnished but the driver. Like thousands do, you'll find it economical and convenient... CALL HERTZ!

Call  
**HERTZ**



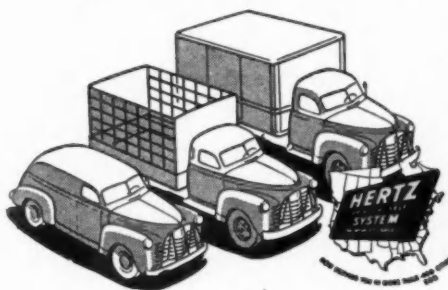
When peak periods or extra heavy loads require an extra truck, don't let deliveries lag when you can rent from Hertz exactly the truck you need... on a moment's notice!



You never know when an emergency need may arise, so be ready... avoid costly delay... call the nearest Hertz station at once!



It's not only thousands of businesses who rent trucks from Hertz for their occasional needs, but thousands of individuals do, too, for moving, and like purposes. Try it!



**Short term rent—long term lease.** Hertz' Truck Lease Plan, for one truck or a fleet... is a proved plan that releases capital investment, and yet gives every single advantage of ownership, at a cost often less than ownership! For complete information about either short-term renting, or long-term leasing, call your nearest Hertz station, or write to the address below. Learn the facts. You'll profit!

## There's no Truck Rental Service as complete as HERTZ SERVICE

**Who can rent from Hertz?** Large corporations, small companies and individuals, too, rent trucks from Hertz. You need only a driver's license and normal identification to rent exactly the kind of truck you need for your specific job. In most of the more than 500 cities in the nationwide Hertz System, fleets of 1/2 ton, 1 ton, 2 ton, pickup, panel, van and stake body trucks are available and are always kept in excellent condition.

**How much red tape?** None at all! Accredited business firms simply call on the phone, make arrangements, send a driver for the truck. Call your Hertz station any time and rent a truck. In a matter of minutes you or your driver will be on the way! You pay only for actual time and mileage... no hidden charges of any kind.

**How small the cost?** For example: the rate for the use of a 1 1/2 ton Stake truck for one day in Miami, Florida, is only \$7.50, plus 9 cents per mile, including gas, oil and insurance. Thus, the total cost for a 30 mile trip is only \$10.20. Rates lower by the week or on a long-term lease. (In some cities, the rates may vary slightly from the above example.)

**Rent passenger cars from Hertz, too!** Hertz, world's largest, has properly conditioned, current model passenger cars for rent in more than 500 cities throughout the United States, Canada, Alaska, Hawaii, Cuba, Great Britain, Mexico and Switzerland. Rent a new Chevrolet or other fine car and drive it as your own for as little or long a time as you want! All gasoline and oil are provided. Public Liability, Property damage, Fire and Theft Insurance and \$100.00 deductible collision protection are provided at no extra cost. Countless thousands rent cars from Hertz for business or pleasure—try it!

Look in your telephone directory under "H" for your nearest Hertz station

National Headquarters: **HERTZ Truck-Rental SYSTEM** Dept. 5563, 218 S. Wabash Ave., Chicago 4, Ill.; phone WEBster 9-5165

COMMERCIAL CAR JOURNAL, June, 1953

## Choose the Right Body Type

Continued from Page 158

### Selecting the Body

**W**HILE it is important to select a "man high" body when this is the most efficient for the job to be done, it is also important to choose the type of body which fits the driver's needs most closely.

For ease in making deliveries, the body should be slightly larger than ac-

tually required by the payload. Steps must be low, and the cargo space floor should be low and level. There must also be sufficient headroom to permit a tall driver to work in the body without stooping. Otherwise driver fatigue will result. For maximum cubic capacity the load space should be a clean rectangle.

To cut road time to a minimum and for increased safety margin, the truck must be easy to handle. A general rule for rating a vehicle in this regard is to choose the unit in the desired capacity range which has the shortest wheel-

base, shortest overall length, widest front tread and sharpest turning angle of the front wheels.

Before comparing the prices of various makes of "man high" trucks, it is wise to draw up fairly detailed specifications covering the dimensions and equipment needed. Comparison of price can then be drawn between the units which meet these needs most closely.

Some items which should be included in your requirements: glass in the rear doors, roof insulation, and a safety check to keep the driver's seat from pitching forward in the event of collision. Square wheel housings should also be specified for units used to deliver packaged goods, cases, etc.

In specifying component parts, it is important to remember that multi-stop operation is rough on brakes, clutches, transmission components, cooling systems, springs, king pins and spindles. To keep maintenance costs low, each of these parts must be chosen to withstand the work load which will be placed on it so that periods between replacements may be extended as long as possible. With present high labor costs the need for frequent replacement of parts can be an important factor in the total cost of operating the vehicle.

For example, one fleet found that by using an oversize clutch it could extend the clutch replacement period by approximately 50 per cent. The same fleet, operating in congested metropolitan traffic found that some of its vehicles were obtaining only half the mileage on brake lining that other units, with a larger lining area on front and rear wheels were getting.

An inadequate cooling system can soon boost maintenance costs. Some of the results: burned and cracked valves, increased fuel and oil consumption, more frequent need for ring and piston jobs; all adding to the cost per unit delivered.

If routes are operated over rough roads, the greater cost of oversize springs can be well justified by their longer potential life. Unless you have data on spring capacities needed, it is probably best to accept the recommendations of the spring manufacturer for the size of spring needed for your operation. Generally speaking, this principle will hold for other component parts too, but to make an intelligent recommendation the salesman must have a clear picture of your needs. Supplying this data is up to you.

**END**

Please Resume Reading Page 82

"WHERE'D YOU GET THAT MONGREL?"  
"HE'S NO MONGREL; HE'S A THOROUGH-  
BRED—FOUR KINDS."

COMMERCIAL CAR JOURNAL, June, 1953



## BENNETT FLEETMETER

### Gasoline Pumps

- ACCURATE INVENTORY CONTROL
- ELIMINATION OF ERRORS
- FASTER REFUELING
- REDUCED MAINTENANCE COSTS
- SAVING IN MAN-HOURS\*

offer these five\* features—and more, because they are especially designed for rugged fleet fueling jobs . . . not a miniature but a full-sized gasoline pump engineered for the fleet operator.

Write for full details

### JOHN WOOD COMPANY

Bennett Pump Division  
MUSKEGON, MICHIGAN  
Offices in Principal Cities





# The right answer to every heavy-duty chrome ring problem



Complete coverage in heavy-duty chrome sets—Hastings gives you everything you need in heavy-duty chrome sets—with chrome top rings or oil rings or oil-compression rings, depending upon engine characteristics and individual operating needs.

## HASTINGS 2C SETS



**Two Torsional Deep Dubl-Test Compression Rings**—Torsional action for faster seating, immediate blow-by control.

**Chrom-Lube**—Wiper type compression ring with chrome-faced steel sections.

**Steel-Vent Chrome**—Provides correct oil control.

## HASTINGS CT SETS



**Two Torsional Chrome-Test Compression Rings**—Smooth, hard, chrome surface increases resistance to scuffing and lowers rate of wear.

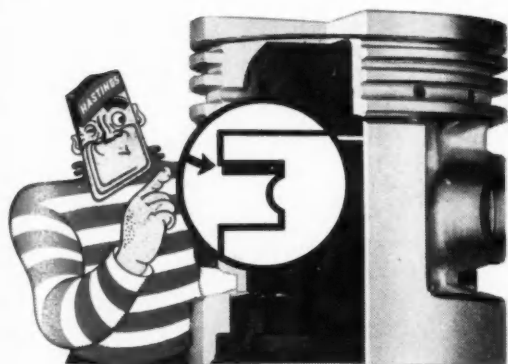
**Flexible Scraper**—Seals compression and materially aids oil control.

**Dubl-Check-X Oil Ring**—A wide channel, quick-seating, high-graphitic cast iron. Light, non-rotating inner-spring.

**Dubl-Check Oil Ring**—Same, except without inner-spring.

Ask for Hastings 2C Sets for re-ring, re-sleeve or re-bore installations. Each Set is *Motor Engineered* to the specific engine. Each incorporates the famous Steel-Vent Chrome oil ring. Top compression rings are regular or chrome, depending upon engine operating characteristics.

If you prefer cast iron oil rings—for re-bore or re-sleeve service—ask for Hastings CT Sets. Top compression rings are chrome-faced. Oil rings are provided with or without innerspring, depending upon engine.



**Hastings Steel-Lock Spacers for longer life**—Fleet operators everywhere say Hastings Steel-Lock Spacers stretch the life of both pistons and rings. Special high carbon steel snaps into top groove, easily machined with Hastings tool bit. Spacer takes most of the punishment of top land and dissipates the heat.

**Field service help for every fleet need**—Hastings Field Engineering Service finds the right answer to every heavy-duty piston ring problem. Hastings *Motor Engineering* follows through with the right ring combination for longest possible service. Ask for Hastings Chrome for your next ring job—for more miles between overhauls, for top performance and economy.

HASTINGS MANUFACTURING COMPANY, HASTINGS, MICHIGAN • HASTINGS LTD., TORONTO  
Piston Rings, Spark Plugs, Oil Filters, Casite, Drouit

# HASTINGS

STEEL-VENT PISTON RINGS  
*Chrome Faced  
for Heavy-Duty Service*



# New Jersey Warning On Contraband Cigarettes

A FRIENDLY warning to truckers traveling in and through the State of New Jersey was recently issued by the State's Cigarette Tax Bureau. Reason for the warning: investigations by the bureau in connection with the New Jersey Cigarette Tax Law have shown

that some drivers are picking up quantities of unstamped cigarettes in tax free states then selling them to employees at New Jersey terminals at a small profit.

The bureau explained that it acknowledges that this practice is not generally

known of or authorized by the owners of the vehicles, but pointed out that if an investigator finds a driver carrying unstamped cigarettes without proper authorization the truck may be confiscated.

Drivers themselves face stiff penalties for selling unstamped cigarettes. Under the state's cigarette tax law and the Unfair Cigarette Sales Act of 1952 the following violations and penalties are listed:

(a) Transacting business without a license—maximum penalty \$250;

(b) Selling cigarettes not bearing required revenue stamps—maximum penalty \$1,000 or imprisonment for not more than one year;

(c) Possession and transportation of unstamped cigarettes—according to the law, anyone transporting cigarettes not bearing stamps required by the tax act must have invoices or delivery tickets for the cigarettes. These must show the true name and address of the consignor or seller, the true name and address of the consignee or purchaser, the quantity and brands of the cigarette transported and the name and address of the person who has or shall assume the payment of the state tax at the point of ultimate destination. In the absence of such invoices or delivery tickets, the cigarettes and the vehicle in which they are being transported *shall be confiscated* and the transporter may be liable to a penalty of not more than \$25 for each individual carton of cigarettes so transported by him. Vehicles confiscated under this law are held by the state until the case is heard by a court.

Bureau officials point out that it is to the advantage of fleet management to warn drivers against violations of the act to avoid confiscation of their vehicles.



**NEW LINTERN "Cylsad"**  
pays 50 lb, Payload Bonus

Thanks to Lintern designers, the new Cylsad Saddle Tank gives you a bonus of 50 lbs. extra payload on every run—at no sacrifice in safety.

New Cylsad models are an average of 50 lbs. lighter, equipped with dual fill-neck arrangements and simple, proven venting facilities. Construction conforms with I.C.C. regulations. Like all Lintern tanks, the Cylsad is subjected to periodic inspection by Underwriters Laboratories, Inc. Lintern inspectors use Freon Gas and the famous G. E. Electronic Leak Detector plus other rigid inspection methods.

The Cylsad offers superior operating advantages as well as crash-proof safety features. Whether you operate gasoline or diesel equipment, the Cylsad will increase your profits, minimize fire damage in accidents.

For complete details ask for Bulletin 1153.

**THE LINTERN CORPORATION**  
ROUTE 20, EAST • PAINESVILLE, OHIO

## Ford F-7 Fire Fighters



Featured at the recent opening of the new Amon Carter Field at Fort Worth, Texas, these Ford F-7 trucks are equipped with modern equipment to fight airplane fires. Each of the closed-cab trucks has a high-pressure pump capable of pumping 500 gal per minute and pressures of more than 600 lb. Both carry 500 gal of water and are equipped with chemical extinguishers, booster reels and hose, fog nozzles and other fire fighting tools. Outfitting was handled by the General Detroit Corp., general fire truck division, Detroit.

# Truck Muffler You Want— • Safety • and SILENCE

Never before have you been able to get such a muffler! The new AP Heavy Duty Truck Muffler has everything you want.

Of course, you want low back pressure. AP gives it to you because of the "offset-through" design and non-clogging extruded holes. Of course, you want long life. AP gives it to you because of rugged, heavy steel construction (weight up to 42 lbs.). Of course, you want safety. AP gives it to you because all-welded construction and precision fitted nipples minimize carbon monoxide dangers.

And of course, you want silence—to silence the complaints of law officers and civic groups. AP gives it to you because special resonating chambers dissipate noise.

You can't beat this new AP Heavy Duty Truck Muffler. So get full information including free catalog from your AP wholesaler or write us today.

**THE AP PARTS CORPORATION**  
1153 AP Building • Toledo 1, Ohio  
Manufacturers of: MUFFLERS • PIPES • MIRACLE POWER • dgt 123



**Heavy Duty  
Truck Mufflers**

## New Hall-Scott Engines

HALL-SCOTT Motor Division, ACF-Brill Motors Co., Berkeley, Cal., has recently announced production of two new, 6-cyl engines for gasoline or LP gas operation. Both the new models, No. 855 and No. 935, have cylinders cast en bloc of chrome nickel molybdenum iron.

Other features common to both engines are hold down studs extending from the crankcase up through the block and cylinder head, a new cylinder head with a "figure 8" combustion chamber and swirl type intake ports for combustion efficiency, and an "octopus" type intake manifold for equal distribution of the fuel mixture and maximum filling of the cylinders.

### Model No. 855

DETAILS of the Model No. 855 include 5½-in. bore, 6-in. stroke, 6 cyl, and a displacement of 855 cu in., with a bare dry weight of 2150 lb. Overall dimensions are 62¼ in. in length, 48 in. in height, and 30½ in. wide.

It is rated at 240 bhp at 2400 rpm, with a maximum torque of 680 lb-ft at 1400 rpm. Using LP gas as fuel, the engine will develop 276 bhp at 2400 rpm, with maximum torque at 775 lb-ft at 1200 rpm. Piston compression ratios have been increased on the gasoline engines to 6 to 1 while LP engines are using 9 to 1 ratio.

### Model No. 935

THE Model No. 935 is rated at 265 bhp at 2400 rpm. Maximum torque is 820 lb-ft at 1400 rpm. The new engine has a nominal compression ratio of 6.4 to 1.

Overall dimensions are: length 62¼ in., height 48 in., width 30½ in. With a 5¾-in. bore and 6-in. stroke, the displacement is 935 cu in. The dry weight of the bare engine (without accessories) is 2150 lb. The butane-powered version develops a rated bhp of 305 at 2400 rpm. Maximum torque is 880 lb-ft at 1400 rpm. The nominal compression ratio is 8.8 to 1.

The crankshaft journals and crankpins have both been increased ¼ in. in diameter, and the crankshaft is now made with 12 counterweights, instead of 6 as previously. The connecting rods have been shortened by ½ in. The rods are rifle drilled for pressure lubrication of the piston pins and spray cooling of piston heads.

Two vertical filters have replaced the two horizontal filters used in former models, and a Ross heat exchanger has replaced the oil cooler. The air compressor is located in the cooling fan blast as in the older model, but it is driven by dual "V" belts to insure a softer drive.

### "Motor Truck Facts" . . . To Be a Yearly

"Motor Truck Facts," published every two years up to now by AMA, hereafter will be issued annually. The move indicates the important status that the trucking industry has assumed in the national economy. This year's edition will be out about August and will contain the usual valuable compilation of data about the industry, including such facts as production, registrations, sales, accident rates, employment, taxes, and various other statistics of value to operators and others interested in promoting good public relations for the trucking industry.



# PIE Sliced Workman's Compensation Loss

Continued from Page 71

men's compensation set-up to determine whether you should be self-insured or buy insurance?

5. If you are buying it, are you buying it right?

6. What are you doing about industrial accident prevention? Is it merely lip service or do you administer a specific and workable program of activities

with full time promotion, education and supervision for the prevention of occupational injuries?

Now let's turn to a concrete program of positive measures applied to on-the-job injury prevention. The activities outlined here are offered with the hope that there may be some suggestions which might be utilized and proved bene-

ficial to those motor carriers whose experience in workmen's compensation is unfavorable.

The following figures show our experience rating modifications:

|                  | 1952  | 1953  |
|------------------|-------|-------|
| California ..... | 95.0% | 88.0% |
| Colorado .....   | 82.5% | 72.5% |
| Idaho .....      | 82.5% | 72.5% |
| Kansas .....     | 82.5% | 72.5% |
| Missouri .....   | 82.5% | 72.5% |
| Illinois .....   | 73.2% | 66.3% |
| Utah .....       | 86.4% | 86.0% |

These figures are the per cent of PIE's rate to the manual rates established for our industry in the various states. The most interesting aspect, of course, is our own reduction in 1953 compared with 1952.

With the close of the year 1949, a loss ratio of 62 per cent presented a challenge to do something about it then and there. We had been concentrating heavily on fleet accident prevention with successful results, but a 62 per cent loss ratio on workmen's compensation meant a direct loss of \$53,000 with additional indirect and intangible losses estimated at three to four times that amount. Here is what we have done and are doing at PIE to reduce the frequency and severity of occupational injuries.

## Supervisors' Safety Conferences

THE first step was an educational program designed for front line supervisors. This was a five-hour course prepared and conducted by the director of safety and split into three sessions at each major terminal from the West Coast to Chicago. One primary theme was developed at each session:

1. Create and maintain active interest and belief in safety and accident prevention. As so aptly stated by Cutter and Elkow at New York University, "There is still too much of an implied tendency to accept the inevitability of accidents and not enough resolute decision that concerted preventive measures can stop most of them."
2. Fact finding through proper interview with the injured and comprehensive reporting.
3. Correction based on facts.

As a part of these conferences, the "accident sequence" developed by H. William Heinrich in the book *Industrial Accident Prevention* was used.

Regularly scheduled conferences are continuing—two or three a year, with almost 200 supervisors attending. A few of the subjects stressed are: Cause analysis of industrial injuries, types, direct and indirect costs, explanation of workmen's compensation rates and experiences, the role of the supervisor

(TURN TO PAGE 168, PLEASE)



America's favorite floor "dry cleaner"

## SOL-SPEEDI-DRI®

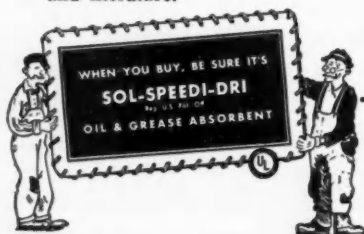
No idle statement, that! For America buys more Sol-Speedi-Dri than any other oil and grease absorbent. That's because pound for pound, dollar for dollar, Sol-Speedi-Dri gives more for the money, all factors considered. "Dry cleaning" with Sol-Speedi-Dri is your best way to keep floors clean and slip-proof. Send coupon today for free sample and literature.

Warehouse stocks maintained in principal cities of the United States and Canada.

Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U. S. to Waverly Petroleum Products Co., 1724 Chestnut St. Phila. 3, Pa. In Canada, G. H. Wood & Company Ltd., Toronto. Branches throughout Canada.

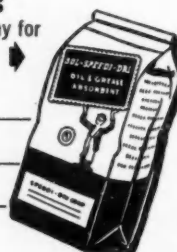
### SPEEDI-DRI CORP.

210 W. Washington Sq., Phila. 5, Pa.



### FREE SAMPLE:

Fill out the coupon and mail today for free sample and literature.



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CCJ-6-53

FLEET OWNERS AND MAINTENANCE MEN...

Here's the simple, effective answer to  
your piston ring problems!

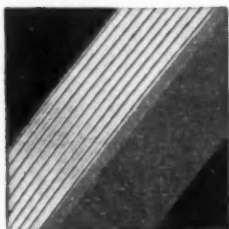
# American Hammered

## Krome-Oil

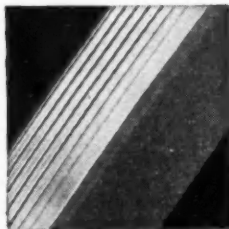
## PISTON RING SETS

They're *pre-seated* to deliver premium performance, holding your maintenance cost to a minimum. If you want to combat initial gas and oil waste, short ring life, sludge clogged oil rings and springs, corrosion, friction damage, scuffing and border-line lubrication, the American Hammered combination of pre-seating and Krome-Oil solves your problems perfectly. *Here's why.*

**PRE-SEATING** guarantees early break-in,  
long life and exceptional oil control



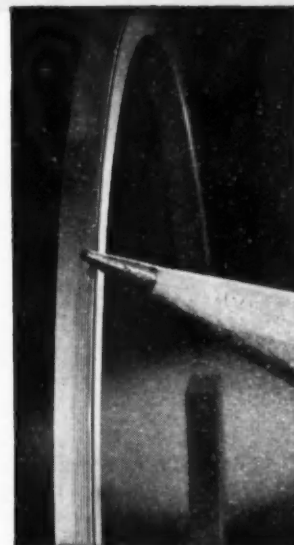
This illustration shows the Krome-faced compression ring of a Krome-Oil Ring Set before pre-seating. If installed as it is, the long-wearing qualities of Krome would prolong the break-in period.



Here the ring has been scientifically pre-seated by a precision lapping method equivalent to 300 to 500 miles of actual engine operation. This guarantees quick seating and fast oil control.

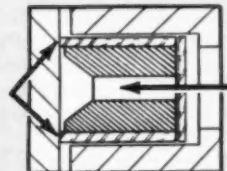
**Photographic evidence of  
efficient American  
Hammered Krome-Oil  
break-in**

This top groove American Hammered Krome-Oil Compression Ring is from a set which was pulled after five thousand miles of use in a heavy duty and extremely rugged fleet operation. In the enlarged photograph at right, note the smooth, even way it is wearing in. High unit pressure and narrow land contact, coupled with the long wearing qualities of Krome, impart maximum efficiency and durability to American Hammered Krome-Oil Piston Ring Sets.



**Cross-section of Krome-Oil Krome Steel Edge Oil Ring in groove**

The Krome-faced steel rails in this set extend beyond the cast iron center section giving instant oil control and long life.



Efficient oil drainage is provided by funnel shaped channel in spacer.

## American Hammered

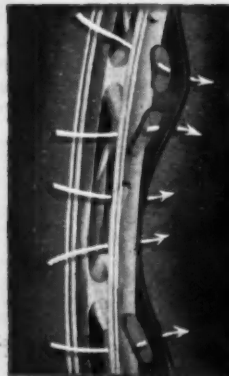
**AUTOMOTIVE REPLACEMENT DIVISION**

2001 Sanford Street, Muskegon, Michigan

Manufacturers of

American Hammered Automotive Replacement Piston Rings

For the best in fleet maintenance, remember American Hammered  
Power-Plus Service—Koetherizing • GI-60 Groove Insert • Dry Film Lubricant

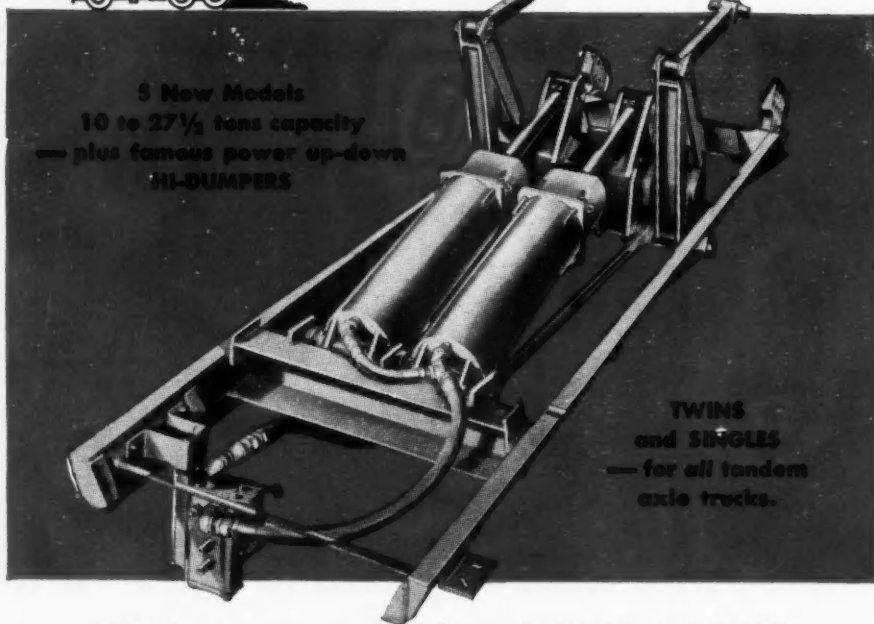


The free-flowing spring in the American Hammered Krome-Oil Piston Ring Set has more oil slots than any other on the market. Its unique slot design eliminates sludge clogged oil rings and springs.

# For better performance in HEAVY-DUTY HOISTS



...insist on St. Paul



5 New Models  
10 to 27½ tons capacity  
— plus famous power up-down  
HI-DUMPERS

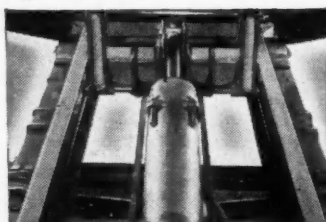
TWINS  
and SINGLES  
— for all tandem  
axle trucks.

**NOW stress-proved and WORK-RATED**  
for lowest cost per payload hour

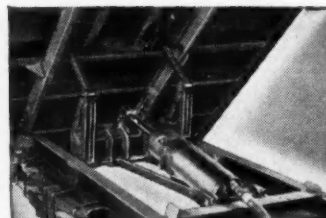
You profit two ways by choosing St. Paul for heavy-duty hoist installations: (1) **NEW stress-proved design** (with 50 advanced improvements) assures better all-around hoist performance. (2) **NEW conservative ratings** — based on practical field experience — mean St. Paul hoists deliver every ounce of capacity shown in the ratings, with plenty to spare!

Consequently, more and more St. Paul users are finding that they can haul consistently full payloads for more hours, with substantial savings in down-time and hoist maintenance — doubly important in heavy-duty operations!

For convincing proof, see your St. Paul Distributor. Or, better still, equip several of your trucks with new St. Paul heavy-duty hoists and let your cost records speak for themselves! St. Paul Hydraulic Hoist, Customer Service Dept. 36131 Main St., Wayne, Michigan.



New sliding tension bars absorb shock loads, avoid danger of cracking side rails or chassis frame.



New equal-lift strut arms equalize stresses, prevent binding or buckling from uneven load conditions.

OUR 41st YEAR

# St. Paul

HYDRAULIC

The original . . . and still the leader

Hoists  
Dump Bodies  
Refuse Loaders

## PIE Sliced Comp. Loss

Continued from Page 166

in accident prevention, and methods of reducing accidental injuries.

Supervisors are taught that accident prevention must be placed on an equal level of importance with the administration of all operational procedures which make up their duties. Furthermore, in evaluating the competency of any foreman, his ability to reduce industrial accidents is an index equal to other measures of production and general supervisory ability.

### Reports and Records

**EVERY** injury is reported following a brief interview between the injured employee and his immediate supervisor. Continual reemphasis is needed on prompt, comprehensive and factual reporting.

Injuries are recorded alphabetically, segregated by stations, and classified by type of injury. Cost figures are prepared monthly. An injury repeater file is maintained and a monthly recap is received from our insurance carrier. The insurance company is immediately notified of any discrepancies.

### Statistical Summaries

**CHARTS** and summaries are distributed monthly to stations showing a breakdown of frequency and severity by stations and departments. Periodic charts are prepared by our insurance company showing premium, number of injuries, medical and compensation costs, and loss ratio. A special breakdown is used to give figures pertaining to various departments within a station.

### Safety Committees

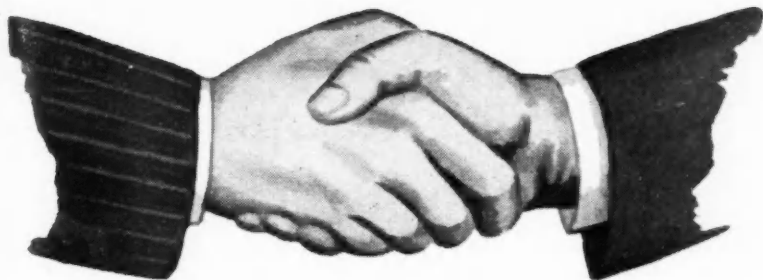
**AN** active safety committee at each major station meets once a month and forwards the minutes of its meeting to the Director of Safety. Recommendations are given to the appropriate foreman who, in turn, has an opportunity at regular employee meetings to stress reduction of his station injury rate along with overall operation problems.

### Display Material

**A LARGE** accident score board is located in each shop and on each dock. It shows the number of days since the last occupational injury, the name of the person last injured, and the number of injuries last month compared with the current month. Appearing on a bulletin board is the monthly injury summary showing the rate and ranks of all stations.

(TURN TO PAGE 170, PLEASE)

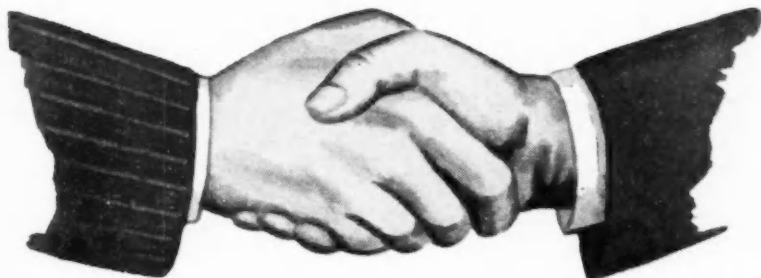




## A FIRM CLASP

### with the FONTAINE NO-SLACK 5th Wheel

The foolproof lock-mechanism of the NO-SLACK 5th Wheel actually *fits* the kingpin with NO-SLACK, with no possibility of lockouts, while permitting full freedom of steering. We've issued a folder that tells how the NO-SLACK lock-mechanism works. Write today and let us send you a copy.



## A FRIENDLY CONTACT

### with TRUCK DEALERS

We've been dealing *directly and exclusively* with Truck Dealers and Factory Branches for a long time. They like that policy, they like doing business with us, and they like our product because it keeps their customers satisfied.

Write today and let us tell you about our selling proposition. It's a GOOD DEAL for TRUCK DEALERS.

*The Only*®

**NO-SLACK**

*5<sup>th</sup> Wheel*

Fontaine Truck Equipment Co., Inc.  
Box 1591                      Birmingham, Ala.

## PIE Sliced Comp. Loss

Continued from Page 168

Here is the way P.I.E. has reduced workmen's compensation costs:

| Year  | Premium      | Incurred Losses | Loss Ratio | Dividend     | Total No. Employees | Cost Per Employee |
|-------|--------------|-----------------|------------|--------------|---------------------|-------------------|
| 1949  | \$ 86,247.61 | \$53,469.29     | 62.0%      | undetermined | 1472                | \$36.32           |
| 1950  | \$104,010.68 | \$38,538.71     | 37.1%      | \$44,045.93  | 1481                | \$26.02           |
| 1951  | \$129,108.14 | \$40,925.22     | 31.7%      | \$61,586.04  | 1809                | \$22.62           |
| 1952* | \$140,498.66 | \$21,371.89     | 15.2%      | \$90,184.05  | 1991                | \$10.73           |

\* Estimated.

### Contests

THE company participates in the National Safety Council's Industrial Accident Prevention Contest and finished in third place last year. There were 19 companies in that particular division with an average rate of 28.13 injuries per million man hours. P.I.E. rate was 11.85. The contest serves to

stimulate interest in the company's showing on a national status.

Within the company, a quarterly trophy is presented to the station showing greatest improvement in its injury rate. As a counter point to this award, a contest was initiated to motivate sta-

tions to stay out of bottom place in monthly standings. The prize for the poorest showing is an 8-Ball trophy upon which is engraved, "Our dock had the worst injury rate in P.I.E. for the past month." There is a similar award for shops.

Of all contests, the 8-Ball trophy gives impetus to the hottest competition. There is one for the district dock supervisor and one for the district service foreman showing the worst rate for the month. This activity is the most popular of all particularly for the station who is on the sending end of the 8-Ball to another station. During a recent month, the plan boomeranged and the



8-Ball trophy landed on the safety director's desk. A perfect record in all shops precluded its being awarded anywhere in the system.

### First Aid Training

REPRESENTATIVES from each segment of the system were assembled at headquarters and given an intensive First Aid Instructor's Course. These men have conducted training courses throughout the system with an aggregate attendance so far of 800 employees. In addition to creating an awareness to possible injury, First Aid training has enabled our people to catch some minor injuries in time before they became disabling.

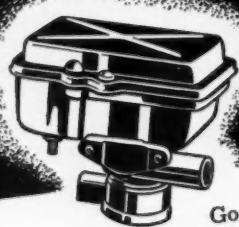
### Keep in Touch

WHENEVER our insurance carrier makes a compensation or medical payment, a copy of the draft is sent to our office. Monthly recaps are thus double checked and cases which appear to be overpaid, too high a reserve, or too long open, are called to attention. Occasionally a change in doctors is suggested when charges are question-

(TURN TO PAGE 174, PLEASE)

# STOP fuel pump failures for good!

## New Stewart-Warner Electric Fuel Pump



Ends Vapor Lock  
Slow Starting  
Frequent Pump Replacements!

Go over the exclusive features below.  
Do it now. See how this new Stewart-Warner Electric Fuel Pump can boost your truck's efficiency every day, every mile!

**No Vapor Lock** . . . independently mounted . . . independently operated, this efficient Electric pump primes itself . . . starts working before engine turns over! Eliminates vapor lock by pushing vapor pocket out of fuel line.

**Instant Starting** . . . in any weather! Delivers all the gas your engine can use. Free flow capacity is 30 gal. or more per hour. Dual unit (the choice of smart truck operators) provides

extra capacity, an extra pump in reserve for emergencies.  
**Longer Life** . . . "road-tested," this amazing Electric pump strokes 10 times less than mechanical pumps. This, plus no rotating parts, no pistons, no bearings to fail or wear out means less "roadside" time . . . less maintenance time and cost for you!

Start profiting from all these advantages today. Write to Stewart-Warner for complete information.



ASK ABOUT THE STEWART-WARNER EXCHANGE PLAN

# STEWART-WARNER

INSTRUMENT DIVISION

Dept. DD-63, 1840 Diversey Parkway, Chicago 14, Illinois

Cost Per  
Employee  
\$36.32  
\$28.02  
\$22.62  
\$10.73

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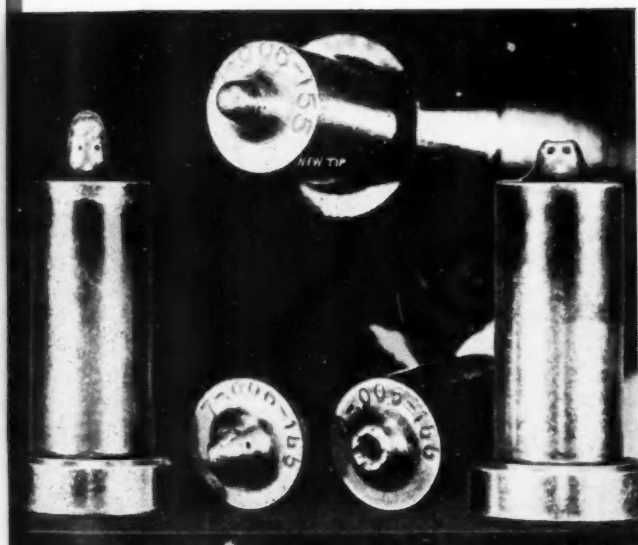
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ASE)

June, 1953

# Down to size

## much as 50%



Inspection of this Diesel engine's air box drains—taking less than 1 minute—could have saved the 1½ hours' labor necessary to replace the tip on each of these injectors.



A 5-minute bearing adjustment would have saved a 1-hour installation—at 12 times the labor cost, plus the cost of a new bearing.

LET your GMC dealer show you how to keep all your troubles—and costs—little ones. He'll help you set up a complete Preventive Maintenance program in your own shop—in his shop—or the best combination of both.

And when replacements are necessary, he'll supply you with parts exactly the same as the originals. Exclusive use of these genuine GMC parts is the surest protection for the out-in-front performance of your GMC's.

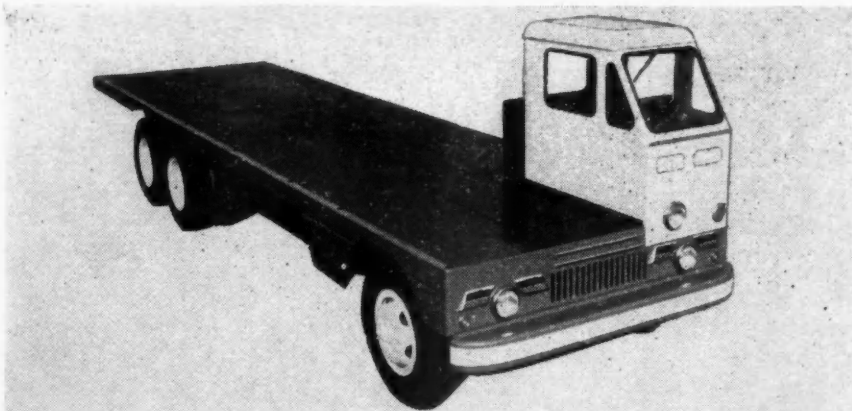
**GMC Truck & Coach Division of General Motors**

Prices quoted are based on prevailing rates in certain metropolitan areas



—best part of any service job!





### Flat Top for Special Hauling

A heavy-duty cargo truck that looks like a highway-borne aircraft carrier is now being manufactured by Murty Brothers, Portland, Ore. The truck, which has a huge steel deck broken only by the "island" formed by the cab in the left front corner, is designed for carrying pipe, lumber, structural steel and other long, bulky cargo that would otherwise require a tractor and semi-trailer. The Murty flat-top is made with both single-axle and dual-axle drive. The single-axle type has a 25 ft deck length with a turning wheelbase of only 14 ft 11 in., giving it an extremely high ratio of maneuverability for the length of its deck. The dual truck has a 30 ft deck and a 17 ft wheelbase. Pay loads are 10 tons for the single-axle and 15 tons for the dual axle. The engine, a 150-hp White, is mounted under the cab.

### PIE Sliced Comp. Loss

Continued from Page 170

able. The entire procedure keeps an alert relationship with our insurance company and stimulates good cooperation.

We attend as many industrial hearings as possible, this is important in demonstrating a sincere interest and a leveling influence in all-around fair treatment.

Naturally an insurance company representative wants to see costs justified and controlled. So do we! It's our money that is being used.

These are a few of the highlights that constitute workable and effective activities for reducing workmen's compensation costs. That only large motor carriers can do these things is an erroneous impression. Any motor transportation firm headed by a management with sound vision and a well-rounded understanding of all operating costs can apply these principles and save needless expenditures of time and money.

Those dollars you get back represent what occupational injuries might have but didn't cost you.

When the gap between what comes in and what goes out shrinks too much, take another look at both direct and intangible, but nevertheless realistic, expenditures from which you get no return for your investment. This deplorable expense is created by blundering mistakes we erroneously call accidents. With the steady trend toward higher workmen's compensation costs ranging from rates to benefits, it is imperative that the use of all possible controls be employed to reduce, industrial injuries. It is being done!

END

Please Resume Reading Page 72

COMMERCIAL CAR JOURNAL, June, 1953

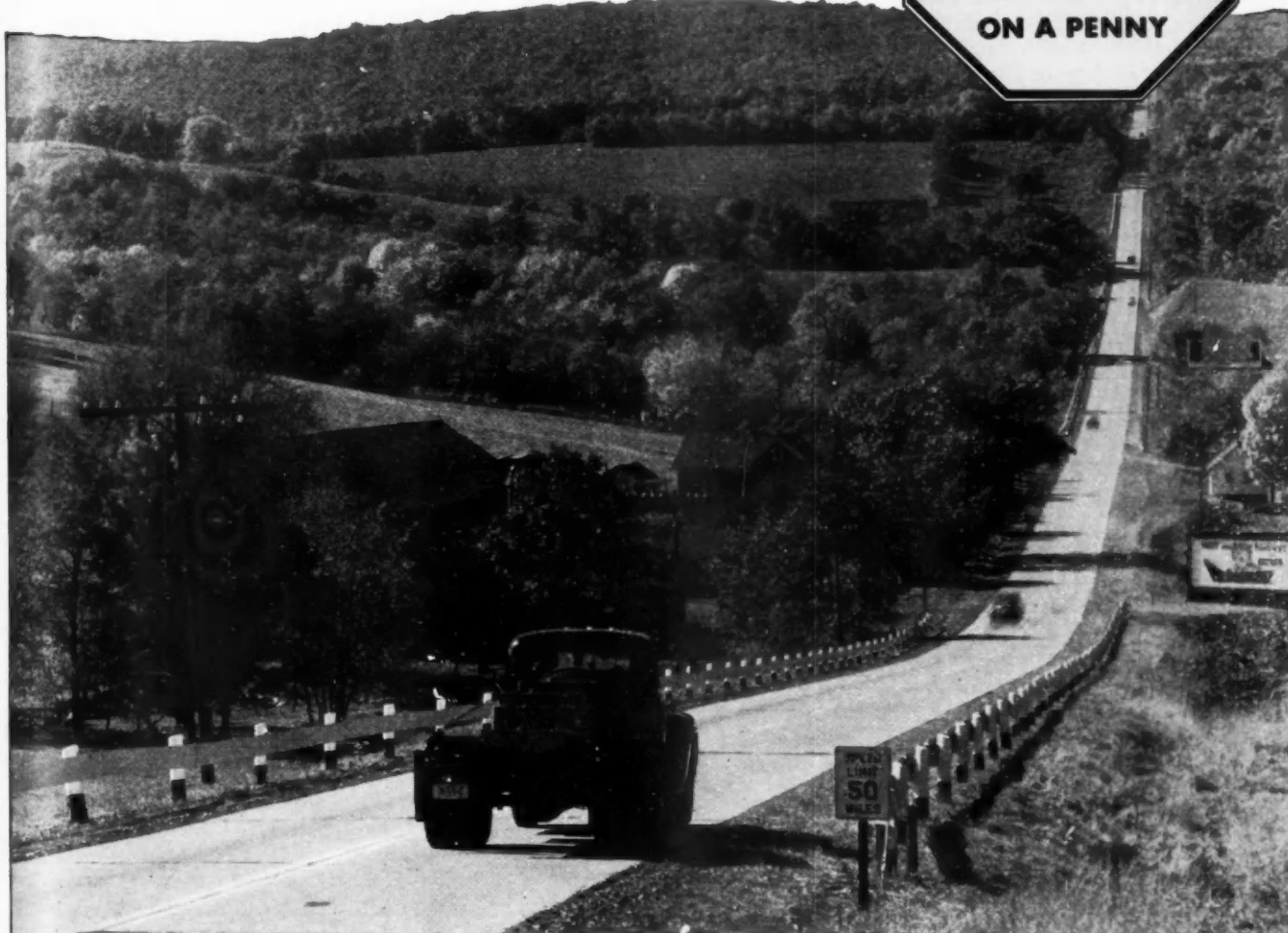
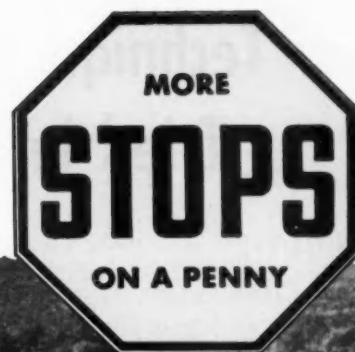


Thousands of fleet operators consistently choose "Speed Wash" over any other fountain brush because it's guaranteed to clean trucks better, faster, and easier than any other. You must be completely satisfied or your money will be refunded in full if the "Speed Wash" brushes you buy are returned within ten days. Order yours today on this money-back guarantee! Send check or money order for postpaid shipment.

**MILWAUKEE DUSTLESS BRUSH CO.**  
530 N. 22 STREET, MILWAUKEE 3, WISCONSIN

| MILWAUKEE DUSTLESS BRUSH CO.<br>530 N. 22 STREET, MILWAUKEE 3, WISCONSIN |  |         |      |
|--|--|---------|------|
| Please ship the following brushes:                                       |  |         |      |
| QUANTITY   | DESCRIPTION  | PRICE   | AMT. |
|  | NO. 240 OBLONG SPEED WASH 11" dia. back for heavy duty trucks, trailers & busses, complete with 5' handle. | \$12.45 |      |
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# We TORTURE Brake Lining here to give you...



Here's one of our Test Trucks making "snub stops" on our Test Run in the mountains of Pennsylvania.

The driver is pouring it on; torturing the lining at temperatures far beyond those reached in normal driving. And he will do it again and again, day after day, till the lining is virtually destroyed.

He is insuring that the American Brakeblok you buy will give you top performance, wherever you go.

Leading bus and truck operators know this. That's why they've made American

Brakeblok first choice on their vehicles. Prove it on your equipment. Order American Brakeblok from your N.A.P.A. Jobber today.

**American  
Brakeblok**

**THE SAFETY BRAKE LINING**

*Brake problems? . . . An American Brakeblok Service Engineer will help you solve them. Write American Brakeblok.*



**AMERICAN**

**Brake Shoe**

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**AMERICAN BRAKEBLOK DIVISION**

**DETROIT 9, MICHIGAN**

**Plants in:**

Detroit, Michigan; Winchester, Virginia; Hillburn, New York; Lindsay, Ontario; Gif, France



# New Techniques for Gluing Wood Tried in Truck Body

A PROTOTYPE wood body for the Army's standard 2½-ton truck has been completed by Timber Engineering Co., research affiliate of the National Lumber Manufacturers Assn. Using one-piece, laminated frame members, the body incorporates new processes for

gluing treated lumber and new waterproof glues.

Although no specific cost figures are available at present, the company reports that using assembly line operation, the wood bodies can be built at a cost within the practical limits accepted

by U. S. Army Ordnance, and that the same techniques and materials applied to mass production of commercial vehicle bodies would make wood bodies competitive with those of steel or other metals.

Says the research company, "There is no reason why manufacturers cannot put all-wood truck bodies into production for commercial use. It was not possible two or three years ago because at that time the process of gluing treated lumber was not known. Since then, we have found out how to do it. Also, we had no suitable waterproof glues—now we do."

Said to be stronger and lighter than the old box-like wood bodies used during World War II, the new wood bodies feature one-piece, U-shaped, bent, laminated frame members. These frame members extend down one side, across under the bottom, and up the other side, similar to a ship's frame.



Edge-glued, solid red oak side panels are glued to one piece, U-shaped, bent, laminated frame members in the body

Side and floor panels are made of edge-glued solid red oak. The side panels are glued permanently to the frames to make a one-piece truss of the entire structure. Floor panels are made in four sections for ease of assembly and quick replacement. To avert possibility of buckling, the floor panels are attached to the frames with expansion bolts operating through elliptical-shaped holes. This is to compensate for any lateral movement.

All wood parts of the truck body have been thoroughly impregnated, said to provide complete protection from fungus attack and decay. Further, they have been treated with a dimensional stabilizing chemical to minimize shrinking and swelling.

The adhesive, used in laminating the frames and edge-gluing the solid lumber parts for sides and floor, is 100 per cent waterproof to prevent delamination, even in exposure to humid tropical conditions or complete immersion in water.

This body has been designated as Type III. Type I will have red oak plywood glued over both sides of the laminated frame members, and Type II will have the plywood on the floor only.

## New

# HEAVY DUTY

## CLASS "A"

## DIRECTIONAL

## SIGNAL LAMPS

No. 404  
Double Lens;  
Amber and Red  
Single Bulb

No. 401  
Single Lens;  
Pedestal Mount

No. 402  
Semi-Flush  
Stud Mount

No. 403  
Flush  
Mounting

**TRUK** **LINE**

**Available in 18 Set Combinations with Manual or Self-Cancelling Switches.**

New — Brighter — Stronger — this 400 Series lamp by Grote is the greatest achievement in Directional Signal Lamps. Heavy duty built to meet the practical needs of truck operators, jam-packed with essential features that make the finest Class "A" single-bulb Directional Signal lamp ever designed. Specify Grote No. 400 Directional Signal Lamps and Sets for installation on your trucks — for greater safety and economy.

**For Sets, Lamps, Switches — Ask Your Jobber.**

**Write for Catalog!**

**THE Grote MFG. CO., INC.**

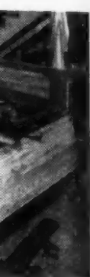
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Opposite Cincinnati



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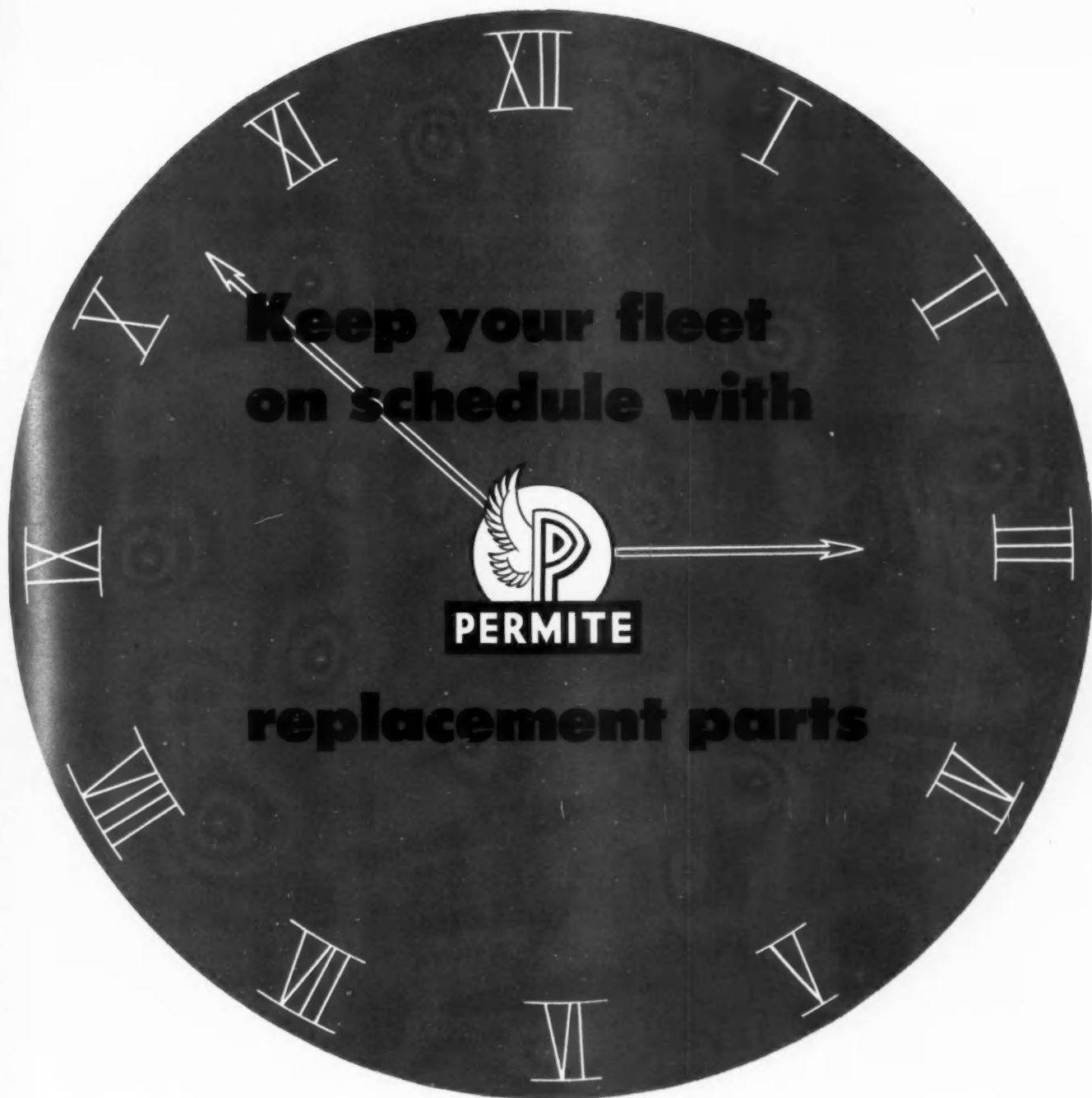
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June, 1953



## PERMITE REPLACEMENT PARTS

PISTONS • PISTON PINS • VALVES  
VALVE GUIDES • VALVE STEM KEYS  
VALVE SPRINGS • WATER PUMPS  
WATER PUMP PARTS  
CYLINDER SLEEVES AND ASSEMBLIES  
TIE-ROD ENDS • SPRING SHACKLES  
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ALUMINUM INDUSTRIES,

Permite Replacement Parts have built a fine record with fleet operators for keeping their trucks, cars or buses rolling up payloads, with only minimum time out for repairs.

Every valve, piston, piston pin or other Permite Replacement Part can be depended upon for dimensional accuracy, rugged durability and superior performance. They are easy to install, hard to wear out. While Permite Parts duplicate original equipment, Permite engineers have originated and incorporated many construction features that improve performance.

To cut maintenance costs, to keep your fleets operating on schedule, make replacements with dependable Permite Parts.

INC. • • CINCINNATI 25, OHIO

# Mighty Mite

## Incorporates New Engineering

RECENTLY demonstrated in a series of tests by the Marine Corps at Quantico, Va., a new lightweight utility truck has been developed by Mid-America Research Corp., Wheatland, Pa. Known as the "Mighty Mite," the 4 x 4 truck is designed for tactical use

by front line infantry units and is suitable for transport by helicopter.

With a 50 mph cruising speed, the "Mighty Mite" is powered by a 4-cylinder, horizontal opposed overhead valve air-cooled engines. Original models were equipped with Porsche engines

rated at 44 hp at 4000 rpm. The Lycoming-Spencer aircraft engine, Model O-145 rated at 65 hp at 2600 rpm is now under consideration as a replacement for the Porsche engine.

An air-cooled engine was selected because of its light weight. Also, since it does not require liquid coolants there are no problems with anti-freeze, ruptured or loose hose connections or thermostats.

Curb weight of the vehicle is 1496 lb. It can carry a payload of 1000 lbs on the highway, 500 lb on cross country operation.



The single unit lightweight transmission combines three speeds forward and one reverse. Of synchromesh design with hi-lo range pattern, it includes a non-spin type differential between the forward and rear differential. This eliminates one external control handle and keeps the vehicle in positive four wheel drive at all times.

Brakes are four-wheel, chassis mounted, conventional two-shoe hydraulic, with built-in self-adjusting features. They are sealed against dirt and water.

Front and rear axles are independent suspensions. Use of cantilever leaf springs provides a dampening action which practically eliminates the necessity of shock absorbers.

A pivot center steering system is used to eliminate most of the steering geometry problems encountered on other conventional vehicles. It is said to prevent transmission of any road shock to the steering wheel, and to give a feeling similar to the power steering type.

The truck has a 64½ in. wheelbase, 96 in. overall length, 58 in. overall width. Standard height is 58 in., but this can be reduced to 45 in. in a matter of seconds by loosening two wing-nuts on the windshield and folding it to the horizontal position. A single cam-lever on the steering column permits dropping the column on the seat cushion and allows a 3 in. adjustment to suit the various sizes of operators.

The utility type body has two seats, while two other men may ride on the fender wells.

TO **SWING** THOSE DOORS,  
LARGE or SMALL,  
USE **E** HINGES on them ALL!

REFRIGERATOR  
PANEL BODY HINGES

NO. 5828

NO. 5829

NO. 5832

NO. 5864

NO. 5833

FOR ROUND CORNER  
BODIES

NO. 5841

NO. 5866

NO. 5814

NO. 5813

Eberhard offers a complete line of truck body hinges, designed and made to withstand the wear and tear of abnormal usage. Write for the Catalog. Refer to it for all your automotive hardware needs.

**EBERHARD** *Long Run*  
TRUCK BODY FITTINGS

EBERHARD MANUFACTURING CO.

Division of the Eastern Malleable Iron Co.

EVARTS AVENUE

CLEVELAND, OHIO



Every  
Mechanic's a  
"Ringmaster"!



Pedrick  
**FORMFLEX**  
Chrome Sets give you  
Piston Ring Performance  
you can budget!

Commercial Vehicle Sets Contain C90 Top Chrome Rings →

It's the one sure way to make every  
overhaul job successful  
and every customer satisfied!

Pedrick FORMFLEX Chrome Piston Ring Sets are truly *all-purpose*. No matter what conditions you encounter—badly worn cylinders, distorted, rebored, resleeved or new—a Pedrick Formflex set will give unbelievably better results. A major reason for the superior performance of Formflex is the amazing new "Equalizer," which delivers the softest, most uniform and positive tension at every point around the cylinder wall. The result is a far better seal with no drag, no high or low spots, a new standard in oil-control efficiency plus far longer life. Why settle for less? Be sure *you and your customers* get the very best—Pedrick FORMFLEX.

There's a  
"NEW ENGINE"  
in every box



Regardless of cylinder condition, there's a Pedrick Formflex Chrome Piston Ring Set that will handle the job best! Call your jobber or write direct

**WILKENING MANUFACTURING CO., PHILADELPHIA 42, PA.**

In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto



# Metro Body Heater

## Features Even Temperatures

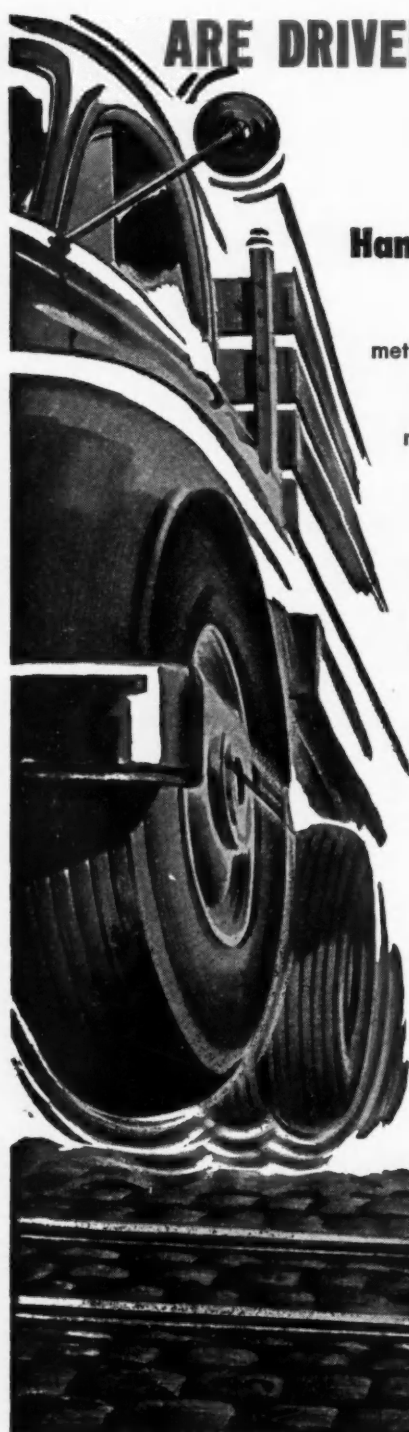
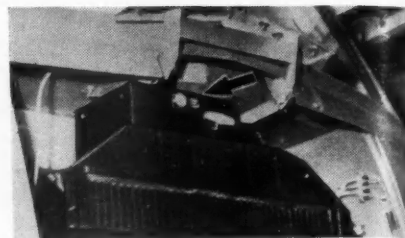
A NEW heating system which supplies heating to the entire Metro body is now available in the new International R-M-120 and R-M-150 series multi-stop delivery trucks with Metro bodies. The system is an integral part of the body construction and is completely concealed. It was de-

veloped through the joint efforts of Metropolitan's engineering staff and engineers of the Evans Products Co., Plymouth, Mich.

The unit has a rated output of 20,000 BTU, moves 175 cu ft of heated air per minute through the truck body. Under normal conditions there is only

a 5-deg temperature drop between the driver's seat and the rear door of the truck.

The heater is installed just above the radiator core. Shielding closes off the area around the outside of the core



## ARE DRIVERS "RAILROADING" YOUR VEHICLES?

### Handy Governors Will Stop It

Any driver is likely to be less than meticulous in his care of a vehicle he doesn't own. Many feel no compunction about "railroading" your vehicles. Drivers do most of their work away from supervision . . . abuses are hard to correct.

Handy Governor will stop "railroading" —stop practices which run up costs and wear out vehicles before their time.

The savings in tire, fuel, and lubricant costs, engine repairs, brake maintenance and general maintenance are spectacular. Reduced accident and insurance costs are equally important.

Let us show you some figures on savings — and tell you how little it costs to get them.



## KING-SEELEY CORPORATION

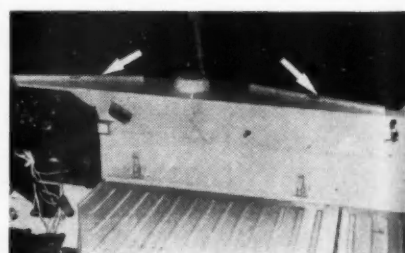
ANN ARBOR, MICHIGAN

PLANTS AT  
ANN ARBOR, SCIO,  
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so that all air entering the front grill of the truck must pass through the core, providing a degree of preheating when the truck is in operation. The preheated air is then drawn up through the heater core from which it is delivered to the truck body.

The core is of the fin and tube type, has heavy gage brass tanks with beaded reinforcement. It is the same size as that used in Evans' underseat bus heaters. The heater motor is a heavy duty, continuous service bus type, equipped with long life brushes designed for low ampere operation. A special type axial flow fan is used to assure an even flow of heat to all outlets under the required pressure.

Compact installation of the heating unit is obtained by addition of a V-shaped stamping which comprises



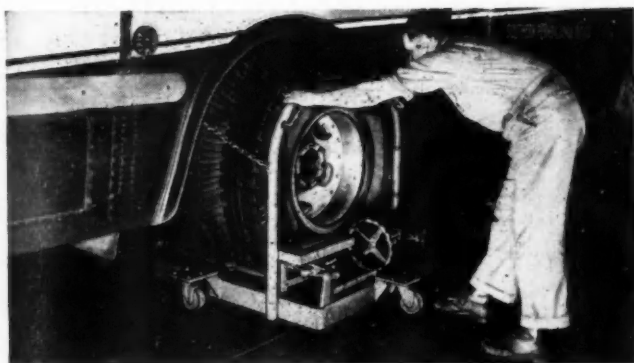
the ductwork and which raises the cowl flush with the bottom of the windshield. This cover is made to conform with the V contour of the windshield cowl and is installed on its top. A rectangular hole big enough to accommodate the heater is cut in the V-shaped cowl at the apex of the windshield. The duct and motor housing stamping is then installed after the heater has been connected.

In addition to the two over-sized hinged defroster vents the duct stamping has three conveniently located hinged doors which can be operated from the driver's seat. At the left side of the enclosed duct cover is a vertical duct that opens just above the truck floor board to the left of the clutch pedal. If desired, heat can be directed to the truck floor.

# Here's how Globe Hoists help put your trucks back on the road *FAST!*

**GLOBE DOCK LEVELING RAMP.** Here you see how a Globe Dock Leveling Ramp eliminates the need for muscling heavy loads from dock to truck. The hydraulically-powered "gangplank" bridges the gap between dock and truck and automatically raises or lowers as the truck springs flex. Cargo can be rolled right into the truck body to save loading time and get trucks rolling sooner.

**GLOBE TRUCK HOIST.** Mechanics have plenty of elbowroom to do a fast job of truck servicing—to do it *better*. A Globe Hoist lifts your trucks into the best possible position for work on chassis, engine, or wheels. All underneath parts are accessible for anything from routine service and lubricating to major overhauls. Down-time is cut to a minimum and maintenance costs kept under control.



◀ **GLOBE WHEEL DOLLY.** There's no need to take another man away from his job to join this mechanic in a "wheel wrestling" match! One man easily handles the heaviest wheels with a Globe Wheel Dolly. He just rolls the dolly into place; slides the wheel unit off the axle; and, when the work is done, slides the wheels back in place. Patented hand wheel gives micrometer adjustment for accurate positioning. The Globe Wheel Dolly handles single or dual wheel assemblies up to 1,800 pounds quickly and *safely*.

**Remember! Globe can supply a Hoist to meet any fleet operator's needs: Automotive and Truck Hoists, Loading Lifts, Ramp Eliminators, Dock Leveling Ramps, Sidewalk Elevators. Use the coupon to find out how Globe Hoists can help you make the most of your manpower and cut materials handling and truck servicing costs.**



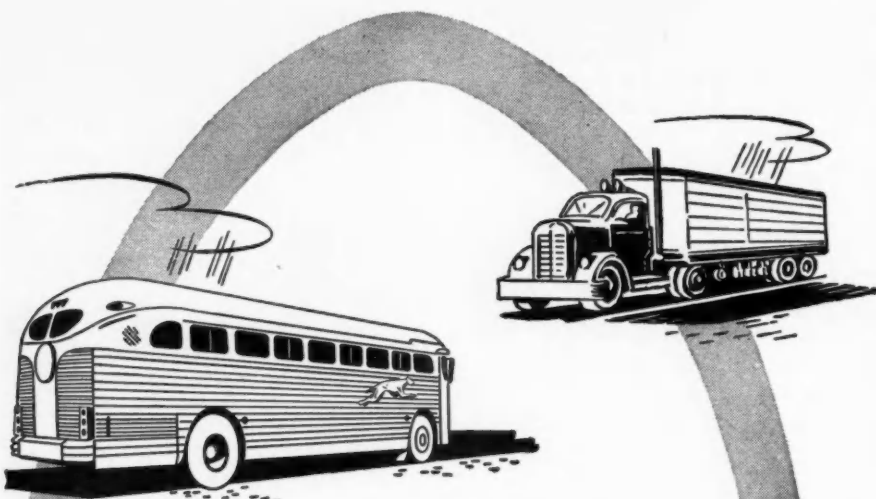
Globe Hoist Company, 1000 E. Mermaid Lane, Phila. 18, Pa.  
Factories at Des Moines, Iowa and Phila., Pa.

Globe Hoist Company  
1000 E. Mermaid Lane  
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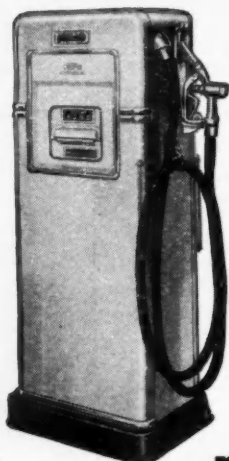
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Please send me complete information on  
☐ Globe Dock Leveling Ramps  
☐ Globe Truck Servicing Hoists  
☐ Globe Wheel Dollies

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...for more efficient  
**FUEL  
HANDLING**



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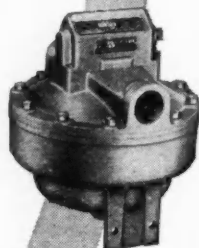
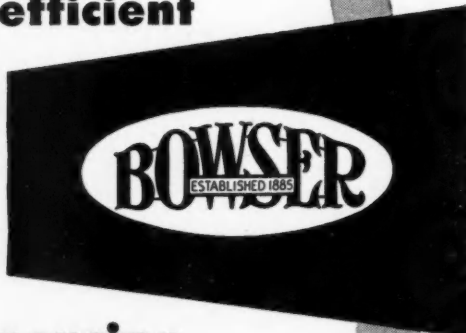
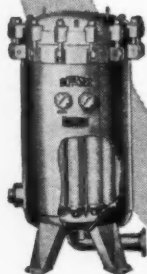
This Bowser ticket-printing fuel dispenser pump delivers up to 25 g.p.m. Printed delivery receipts provide accounting for each unit. Bowser also supplies systems of higher fueling rates for every fleet requirement.

### metering

The heart of your "cost control" should be a Bowser XACTO meter. These "sealer approved" meters will accurately check fuel oil receipts, record dispensing and provide consumption data on all units.

### filtering

Chances of clogged injectors and undue engine wear are minimized with Bowser Micro-Filtered fuel. Watch downtime and maintenance costs drop when your fuel is Bowser-filtered.



MAY WE SEND YOU MORE INFORMATION?

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## Better Roads— How to Get Them

**A**DEQUATE Roads was the subject of a recent SAE dinner-meeting of the Metropolitan Section recently, when two well-known speakers took to the podium. Arthur C. Butler, Director of the National Highway Users Conference, briefed a group on PAR, or Project Adequate Roads. He voiced the hope that the engineers would carry on active support for better highway systems, and he emphasized the need for immediate action in improving our present day inadequate streets and roads.

Roy E. Jorgensen, Engineering Counsel of the Conference, described a relatively new method for arriving at highway improvement priorities. The method, termed Sufficiency Ratings, was called a "businesslike approach to the highway problem." Mr. Jorgensen outlined in detail a method of improving program reports from state highway departments.

"Most highway departments make annual or biennial reports," he said, but they are not program reports." He continued, "Probably in many cases, the reports are prepared and published to meet legislative or administrative requirements. In general, they are accounting, rather than program reports. They contain a mass of statistical data showing what monies have been spent, equipment purchased, and mileages of road types by counties or towns. They contain also, a description of the activities of the several divisions or bureaus of the highway department. Many of these reports are excellent for their purpose—an historical record of the department activities for a year or a biennium. But, they are not the kind of simple, easy-to-read report on the highway and street system that is needed to obtain and maintain an informed public.

"It has been shown that we need an annual inventory of the highway system as a sound basis for a businesslike approach to highway planning and programming. But, so also do we need a clear-cut, simple presentation of the inventory, so the public, highway users, and the legislators, can understand how the highway business stands. It needs to be made annually, so the interested individuals do not lose touch between reports, as might occur with more infrequent reporting. Annual reports are essential, too, so progress

(TURN TO PAGE 185, PLEASE)

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## Chicago's Greyhound Home

Chicago's new Greyhound bus terminal, recently opened, is said to be the largest and most elaborate independently-owned facility of this type in the world. Buses enter through a private tunnel from Wacker Drive, avoid center city congestion. Some 300 to 500 buses are expected to pass through the terminal each day. Covering a 66,000 sq ft area, the five-level structure contains the latest in bus depot facilities, many stores and restaurants and parking space for 500 automobiles.

## Better Roads—

Continued from Page 182

from year to year is consistently brought to the attention of everyone interested.

"I call these annual reports, program reports, yet I have been talking about an inventory and laying stress on annual reporting of the inventory. I have done this, because I am convinced that the inventory is the basic essential to any good program for adequate roads. If we have a good inventory which reflects the condition and adequacy of all parts of the road system, we can be fairly confident that the annual programs will be well established and directed toward orderly development of the highway system, with proper attention to the most urgent needs. Particularly, will this be true if wide publicity is given to the annual inventory.

"However, in the interests of presenting an effective picture of the highway system and its development, I suggest that the annual program report include a listing of project accomplishments during the past year, and a listing of projects which will be undertaken in the next year. Every effort and all the ingenuity of the highway engineers should be directed toward making these listings as informative and effective as possible, illustrating what is being done, what criteria have determined the inclusion of projects and, as well, the conditions which make necessary the postponement of certain projects, even though the existing facility is critically deficient. Illustrations, particularly maps and charts, should be helpful in presenting the story in a manner that all can understand.

"It is possible that in some states, it will be found necessary to get legislative authorization for annual program reporting."

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Your authorized Airco dealer maintains a full supply of moderately priced outfits for welding ... brazing ... heating ... cutting ... or soldering. If no standard set-up meets your particular requirements, he can recommend the proper combination of units — and assemble your special-purpose outfit from stock.

Every item is backed by the Airco reputation ... and delivered promptly to your door!

Whether you want to buy ... or simply seek information, check your Airco dealer first! Consult your classified phone directory (under Welding Equipment and Supplies)...look for the famous sign.



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AT THE FRONTIERS OF PROGRESS YOU'LL FIND

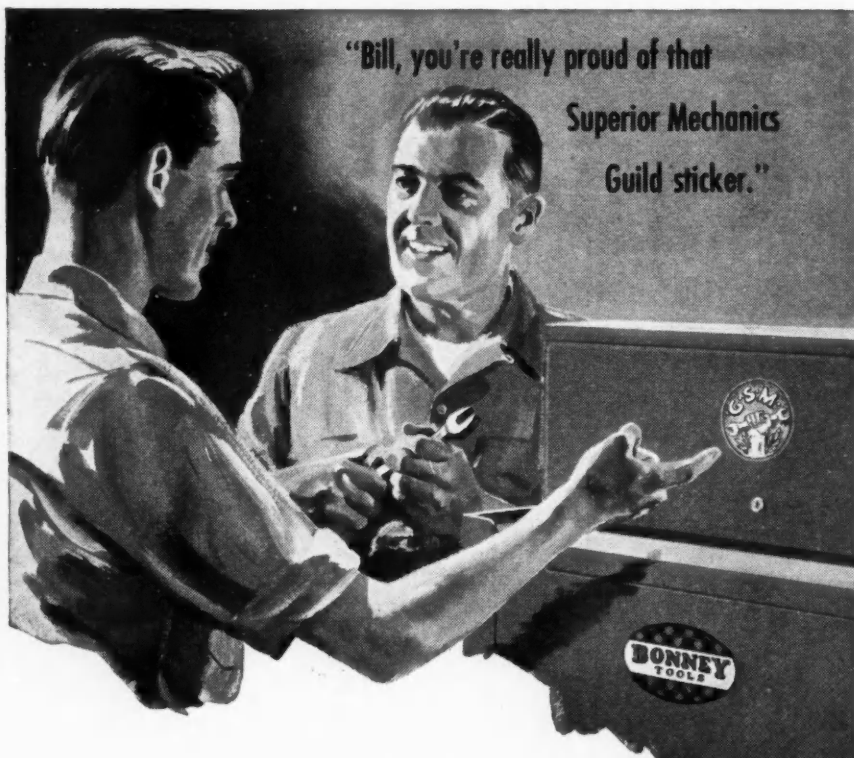


# FLEETMAN'S LIBRARY



Motor oil, Gulf's XHD all-purpose motor oil designed to reduce engine deposits

and wear, is described in a new booklet that illustrates the advantages of the oil



"I sure am, kid. As proud as you are of your reputation as a hotshot trouble-shooter. I'm proud of the tools in that kit too.

I felt lucky when they picked me for that award. You'll be the next in the shop to get it—so save your wise talk. You're smart at using your head. Be smart with your hands, too, and never use anything but those Bonney knuckle-savers.

Here's some more good advice: 'If you're short, buy BON-E-CON\* tools.' Either way, they're topnotch tools at the right price."



Remember. Your local Bonney Jobber, as well as Bonney, stands behind the tools you buy. He has Bonney tools priced to fit your needs as well as your pocketbook.

**BONNEY FORGE & TOOL WORKS • ALLENTOWN • PENNSYLVANIA**

as determined in actual tests. Write Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa., for a copy of Form No. AD 5948, "Gulfube Motor Oil, XHD."

Materials handling equipment chart and selection guide, available at \$1.00 per copy from *Distribution Age*, 56th and Chestnut Sts., Philadelphia, is a complete analysis of materials handling equipment and a listing of principal applications.

Earth moving equipment powered by General Motors two-cycle diesel engines in from 10 to 34 ton capacity is described in a new catalog. You can obtain a copy from Euclid Road Machinery Co., Cleveland 17, Ohio.

Motor flush, its advantages and uses, are described and results of actual tests illustrated in brief publication available from Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa. Write for No. AD 5573, "Gulf Motor Flush."

Fire prevention publications, in addition to those listed on page xx, are listed in a bibliography issued free by National Fire Protection Assn., 60 Battery-march St., Boston 10, Mass. Of interest to fleet operators is a 42-page publication, "Employee Organization for Fire Safety," available from the association at 50¢ each.

"High Speed Diesel Engines" by P. M. Heldt has recently been issued in its seventh edition. This well-known reference book, by the equally well-known dean of automotive editors, covers theory, design, application, operation and fuels. The latest edition includes a new pair of tables of crank arrangements for two-stroke engines, with expressions for any unbalanced forces and couples for different arrangements. There is also a discussion of the problem of atmospheric variables (pressure, temperature and humidity) on the output and fuel economy of the diesel. The book is published by P. M. Heldt, Nyack 9, N. Y. Price \$7.00.

Petroleum products and lubricants described according to ASTM Standards are covered in the latest edition of "ASTM Standards on Petroleum Products and Lubricants." Copies are available from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa., at \$5.75 each in heavy paper cover and \$6.40 each in cloth cover.

Safety services and accident prevention aids available from the National Safety Council are described in the Council's new Service Guide No. 2.1. For your copy write the Council at 425 North Michigan Ave., Chicago 11.

Fleet maintenance record forms are described in a catalog available from Fleet Forms, P. O. Box 793, Columbus 16, Ohio.

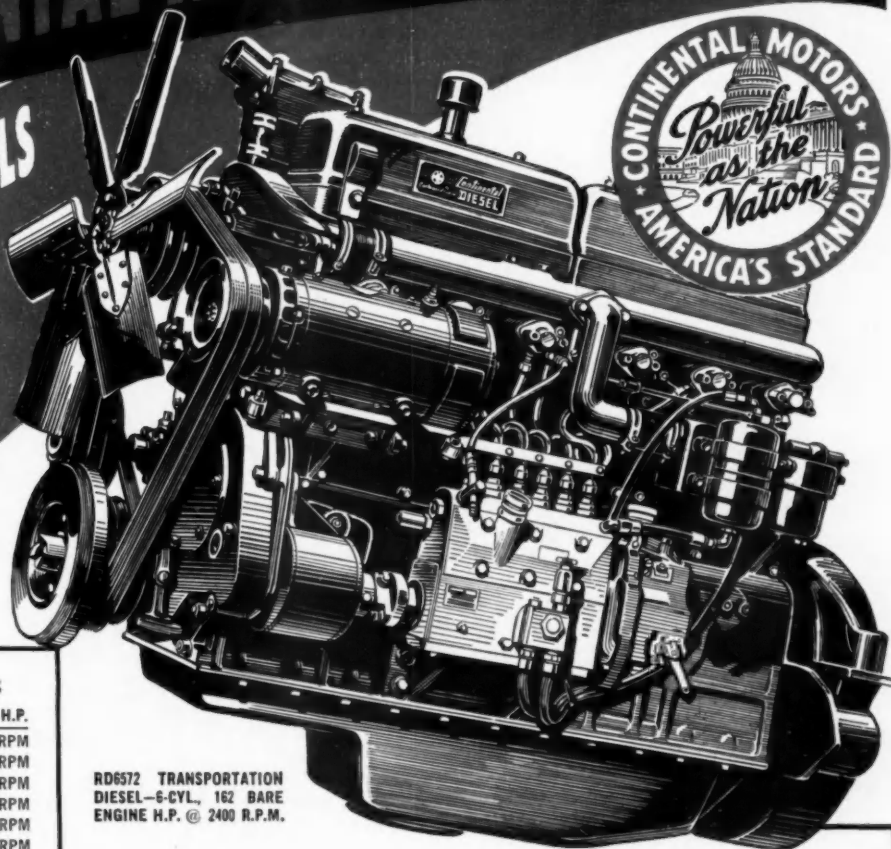
Gas arc welding with Heliarc torches is described in a new catalog available from Linde Air Products Co., 30 East 42nd St., New York 17.

Heavy duty dump truck bodies and hoists made by Gar Wood Industries, (TURN TO PAGE 188, PLEASE)

**YOU'LL GO FAR**

**with CONTINENTAL RED SEAL POWER**

**28 BASIC MODELS  
FOR TRUCKS  
AND BUSES**



#### TRANSPORTATION GASOLINE ENGINES

| Model  | Cyl. | Bore  | Stroke | Displ. | Bare Engine H.P. |
|--------|------|-------|--------|--------|------------------|
| N4062  | 4    | 2 1/8 | 3 1/2  | 62     | 26 @ 3400 RPM    |
| Y4069  | 4    | 2 1/2 | 3 1/2  | 69     | 28 @ 3400 RPM    |
| Y4091  | 4    | 2 3/4 | 3 1/2  | 91     | 36 @ 3400 RPM    |
| F4124  | 4    | 3     | 4 1/4  | 124    | 47 @ 3200 RPM    |
| F4140  | 4    | 3 1/8 | 4 1/4  | 140    | 52 @ 3200 RPM    |
| F4162  | 4    | 3 3/8 | 4 1/4  | 162    | 58 @ 3200 RPM    |
| F6186  | 6    | 3     | 4 1/4  | 186    | 77 @ 3500 RPM    |
| F6209  | 6    | 3 1/8 | 4 1/4  | 209    | 90 @ 3500 RPM    |
| F6226  | 6    | 3 3/8 | 4 1/4  | 226    | 99 @ 3500 RPM    |
| M6271  | 6    | 3 1/4 | 4 1/4  | 271    | 97 @ 3000 RPM    |
| M6290  | 6    | 3 3/4 | 4 1/4  | 290    | 108 @ 3000 RPM   |
| M6330  | 6    | 4     | 4 1/4  | 330    | 125 @ 3000 RPM   |
| K6271  | 6    | 3 3/4 | 4 1/4  | 271    | 115 @ 3200 RPM   |
| K6290  | 6    | 3 3/4 | 4 1/4  | 290    | 123 @ 3200 RPM   |
| K6330  | 6    | 4     | 4 1/4  | 330    | 145 @ 3200 RPM   |
| B6371  | 6    | 4 1/4 | 4 1/4  | 371    | 124 @ 3000 RPM   |
| B6427  | 6    | 4 3/8 | 4 1/4  | 427    | 142 @ 3000 RPM   |
| T6371  | 6    | 4 1/4 | 4 1/4  | 371    | 144 @ 3000 RPM   |
| T6427  | 6    | 4 3/8 | 4 1/4  | 427    | 170 @ 3000 RPM   |
| U6501  | 6    | 4 1/2 | 5 1/4  | 501    | 178 @ 2600 RPM   |
| R6513  | 6    | 4 1/2 | 5 1/4  | 513    | 180 @ 2800 RPM   |
| T 6572 | 6    | 4 3/4 | 5 1/4  | 572    | 200 @ 2800 RPM   |
| R6602  | 6    | 4 3/4 | 5 1/4  | 602    | 212 @ 2800 RPM   |
| S6749  | 6    | 5 1/8 | 5 1/2  | 749    | 250 @ 2800 RPM   |
| S6820  | 6    | 5 1/4 | 5 1/2  | 820    | 275 @ 2800 RPM   |

#### TRANSPORTATION DIESEL ENGINES

| Model  | Cyl. | Bore  | Stroke | Displ. | Bare Engine H.P. |
|--------|------|-------|--------|--------|------------------|
| TD6427 | 6    | 4 3/8 | 4 1/4  | 427    | 116 @ 2400 RPM   |
| RD6572 | 6    | 4 3/4 | 5 1/4  | 572    | 162 @ 2400 RPM   |
| SD6802 | 6    | 5 1/4 | 5 1/2  | 802    | 217 @ 2200 RPM   |

RD6572 TRANSPORTATION  
DIESEL—6-CYL., 162 BARE  
ENGINE H.P. @ 2400 R.P.M.

When you choose a vehicle powered by Continental Red Seal engine, you tap a reservoir of experience unsurpassed in the engine-building field. Continental, and Continental only, delivers the balanced combination of power, economy, dependability and long life resulting from all these features—an array found nowhere else:

Patented individual porting . . . full-length water jacketing with directional coolant flow . . . full-pressure lubrication . . . leakproof water pump . . . patented oil and dust seals . . . sodium-filled positive-rotation exhaust valves, stellite-faced . . . dynamically-counterbalanced crankshaft with Tocco-hardened journals . . . five-ring light alloy pistons with chrome-plated top ring . . . all these, and countless other quality features evolved through the years.

FOR MOST MILES, LOWEST TON-MILE COSTS, AND THE BACKING OF COUNTRYWIDE SERVICE, CHOOSE A MAKE WITH RED SEAL POWER.

***Continental Motors Corporation***

MUSKEGON, MICHIGAN



## Fleetman's Library

Continued from Page 186

Inc., Wayne, Mich., are listed and described in their new catalog No. HB 302.

**Welding advantages and techniques** are covered in a 19 min film that may be borrowed without cost by contacting Technical Information Service, Dept. "P," Eutectic Welding Alloys Corp., 172nd St. and Northern Blvd., Flushing 58, N. Y.

**Hydraulic pullers** in use on truck and automobile maintenance are shown in a

new service manual. You can get a copy by writing Owatonna Tool Co., 341 Cedar St., Owatonna, Minn., asking for Power Twin Bulletin No. HY 1953.

**Freight claims** are discussed in a new book, "Law of Freight Loss and Damage Claims," by John M. Miller, executive secretary, National Freight Claim Council, American Trucking Assns. For information on this 632-page volume, write to publisher, Wm. C. Brown, Dubuque, Iowa.

**Methods, time study and wage incentive terms** are defined in a new publication designed to aid in labor contract discussions. Copies are available at \$1.00

each from Society for Advancement of Management, 411 Fifth Ave., New York 16, N. Y.

**Flexible metal hose products** produced by Universal Metal Hose Co. are described in Technical Data Book No. U-111. The address is 2133 South Kedzie Ave., Chicago 23, Ill.

**COE trucks** in Mack's new H series are described in a catalog available from Mack Motor Truck Corp., Empire State Bldg., 350 Fifth Ave., New York 1, N. Y.

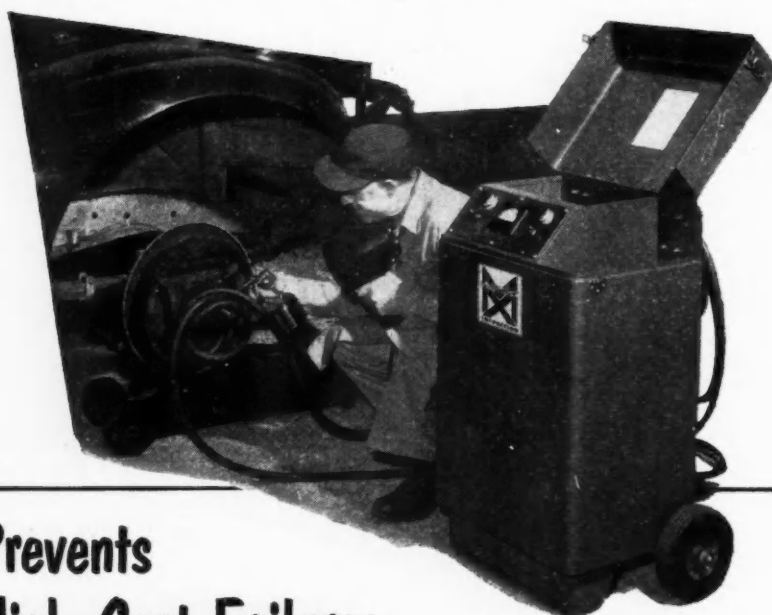
**Brass fitting identification chart**—double compression, inverted flare tube, SAE flared tube and solderless compression—can be had from E. Edelmann and Co., 2332 Logan Blvd., Chicago 47, Ill.

**Petroleum transport tank trailers** with capacities from 4000 gal up, just announced by The Heil Co., are covered in Bulletin No. TT53213. Write for a copy at Milwaukee 1, Wis., or Hillside, N. J.

**Vehicle fueling and tire servicing equipment** as a way to reduce operating costs and increase shop efficiency are described in a folder available from John Wood Co., Bennett Pump Division, Muskegon, Mich.

**Truck refrigeration** without use of gasoline engines is explained in Bulletin No. K-T available from Kold-Hold Mfg. Co., Lansing, Mich. The bulletin describes the company's compressor unit that is driven from the propeller shaft, power take-off or live axle.

**Summary of state laws** governing fees and taxes applicable to motor trucks is available without charge to members of the Private Carrier Conference, American Trucking Assns., Inc., 1424 Sixteenth St., N. W., Washington 6, D. C.



## Prevents High-Cost Failures...

### the MAGNAFLUX\* KH-05 for Lowest Cost Inspection

You know the unexpected costs—the danger, destruction, and delay—that so often result when equipment fails on the road. Now, for only \$485, with a Magnaflux KH-05 Inspection Unit you can eliminate or minimize these needless losses.

The KH-05 locates both surface and sub-surface defects. It enables you to spot instantly and positively invisible cracks that tell of approaching failure of critical parts. No other unit under \$1400 approaches its sensitivity, dependability and convenience. It is lowest cost "insurance" that pays for itself many times over. *Prompt delivery, if you order now.*

\*Magnaflux and Magnaglo are U. S. Registered trade marks of Magnaflux Corporation.



## MAGNAFLUX

MAGNAFLUX CORPORATION • 7308 W. Lawrence Ave., Chicago 31, Ill.  
New York 36 — Pittsburgh 36 — Cleveland 15 — Detroit 11 — Dallas 9 — Los Angeles 58



**\$485 Complete!**

With equipment for dry powder inspection, F.O.B. Chicago  
MAGNAGLO\* accessory kit, used in illustration, available at extra cost

### FAST, TEST-ALL INSPECTION for

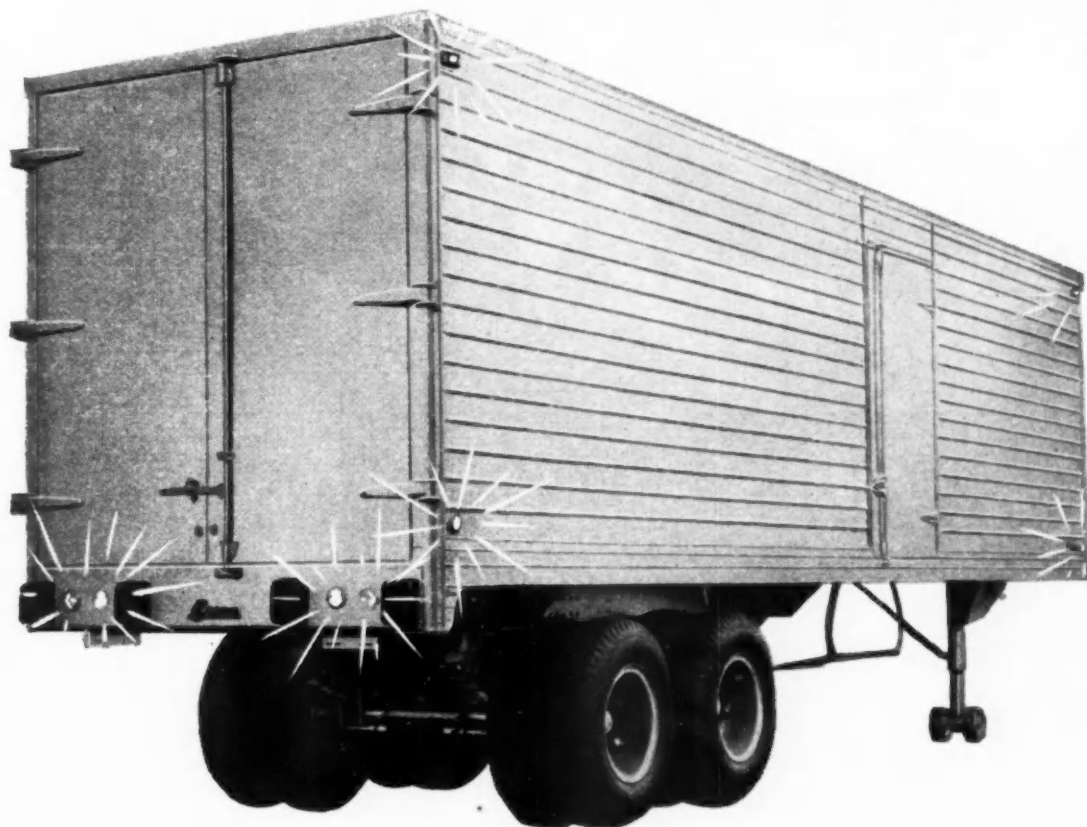
- Cracked blocks (suspected areas)
  - Cracked heads
  - Spindles (in place on trucks and buses)
  - Rear axles and housings (in place)
  - Spring hangers (in place)
  - Frame members (in place)
- FOR INSPECTION OF LARGER PARTS OR DURING OVERHAUL AND REBUILDING SEE YOUR AUTHORIZED MAGNAFLUX OVERHAUL STATION

### Built-in Bounce



Rubber guard posts built by the Good-year Tire & Rubber Co. are now being tested at a dangerous traffic intersection in Cuyahoga Falls, Ohio. The posts have a concrete base in which an 18-in. long steel tube is imbedded so that it projects only a few inches from ground level. To this is attached a 5-ft long hollow rubber tube. Engineers hope that when a vehicle hits the rubber posts they will bend enough to allow it to ride up over them, or will slow the vehicle sufficiently to prevent serious injury to the driver.

# Brown standard conduit wiring gives LIGHT INSURANCE



## Still another step forward in trailer manufacture

**LIGHT** insurance that means *Safety* — Brown Aluminum Trailers' externally accessible conduit wiring system has given leading trucking companies this protection since 1950. Yes — Brown Trailers were first in the field with this progressive step in trailer design.

### These Features Give Brown Trailer Operators LIGHT INSURANCE

1. Externally accessible . . . there is no necessity to unload or shift cargo in order to reach any point on this wiring system.
2. Wires are impervious to certain external damage such as from rocks, rubbing, etc.
3. The wiring installation is extremely rigid, held firmly in place with metal brackets.
4. Conduit types are both BX and thin-walled rigid metal. Wires are safely and securely enclosed.
5. Wires are all color-coded for quick and easy identification.

6. Wiring is waterproof under every weather condition.

7. Because of the high degree of efficiency in this enclosed electrical system, repairs are few and far between and maintenance costs are amazingly low.

*Look to Brown for "firsts" in the field of trailer design.*

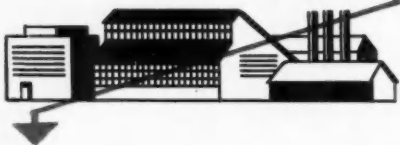
✓ Lighter Weight

✓ Bigger Payloads

✓ Increased Profits

Toledo • Spokane • Reading  
Distributors in principal cities

# FACTORY FLASHES



Babaco Alarm Systems, Inc., New York City, has appointed three new service agencies, American Tire Co., At-

lanta, Ga.; Leo A. Cavanaugh, Inc., Manchester, N. H., and Klaus G. Citterman, Portland, Ore.

White Motor Co., Cleveland, Ohio, recently conducted a group of Ohio State University industrial engineering students through its plant.

Westinghouse Air Brake Co. has purchased the earth-moving machinery business of R. G. LeTourneau, Inc., including plants at Peoria, Ill., and Toccoa, Ga. Le Tourneau will continue to operate its Vicksburg, Miss., and Longview, Texas, plants, producing land clearing equipment and cranes.

Topper Equipment Co. has now moved to its new 40,000 sq ft manufacturing plant at Rahway, N. J.

B. F. Goodrich Co., Akron, Ohio, has acquired the sales offices and business of Walter W. Metzger, Inc., distributor of Koroseal upholstery material. It will be operated as a part of Goodrich's plastic products division under the supervision of A. W. Ketlar. Metzger will continue with the unit as a consultant. The address remains the same, 801 Fisher Bldg., Detroit.

Miller Mfg. Co., Detroit, has acquired full ownership of Bonney Forge and Tool Works, Allentown, Pa. Bonney will continue operation as a subsidiary of Miller.

Transportation Equipment Co., Newark, N. J., has added sales and service of Cresci dump and high-lift coal bodies to its line.

Bendix - Westinghouse Automotive Air Brake Co. has begun construction of a new plant in Oklahoma City, Okla. The company's Elyria, Ohio, has been expanded another 120,000 sq ft.

Accurate Parts Mfg. Co. and Replacement Unit Co., both of Cleveland, Ohio, have been merged with Maremont Automotive Products, Inc., Chicago. The two companies will continue to operate as subsidiaries of Maremont.

Oil Dri Corp., Chicago, has recently expanded its field sales program to help fleetmen with oil and grease floor maintenance problems.

Perry Filter division, R. M. Hollingshead Corp., headquarters are now centered in Camden, N. J.

Raybestos - Manhattan, Inc., has moved to its new office and warehouse at 6010 Northwest Highway, Chicago.

Fruehauf Trailer Co., Detroit, announced total 1952 sales of \$162,809,644 as compared to 1951's \$161,612,310. Net earnings for 1952 were \$5,711,525.

Eutectic Welding Alloys Corp., Flushing, N. Y., has opened a new eastern divisional office at Industrial Bldg., 1060 Broad St., Newark, N. J.

Owatonna Tool Co., Owatonna, Minn., has a new warehouse service at 76 Fourth St., N.W., Atlanta, Ga.

Reo Motors, Inc., Lansing, Mich., has announced an optional front end design for all its trucks and tractors with overall dimension of 102 in.

Fram Corp., Providence, R. I., now offers a 90 day, money back guarantee on its positive crankcase ventilator.

International Harvester Co., Chicago, has opened its new branch at South Clinton and Duck Sts., Fort Wayne, Ind.

Seiberling Rubber Co., will produce tires for Standard Oil Co. of Ohio to sell under the Atlas brand name.

Fram Corp., Providence, R. I., reports consolidated net earnings per share of common stock of \$1.24 after taxes for 1952 as compared with \$1.09 in 1951.



## STOP

## COSTLY SKID ACCIDENTS

# Penetred

THERMODUCTOR

## SKID-CONTROL COILS

FOR ALL YEAR 'ROUND

Penetred THERMODUCTOR Steel Claws give you Skid-Control and MAXIMUM DRIVING SAFETY all year 'round . . . Claws that cut thru Ice and Snow in winter, and Slick road film in summer, for INSTANT ACTION . . . DEPENDABLE ACTION. No precious time wasted, no turning on the switch, and waiting for sand or grit . . . just apply the brakes, for SAFE Straight Line Stops . . . or step on the gas, for FASTER Starts without side Sway or slip.

**COOLER RUNNING**

Penetred THERMODUCTOR Coils also reduce excessive heat that destroys vital tread rubber in regular tires, by conducting it out of the shoulder area . . . to give you the COOLEST running tire ever known.

**FEWER PUNCTURES**

Penetred THERMODUCTOR Coils act as an armour plate and reduce punctures from 75 to 90 percent, by shunting off broken glass, nails and many other objects that otherwise cut the carcass, and keep it in better condition for the second and third retread . . . for longer mileage. Some records show from 35 to over 100 percent increase.

**Get a Free Demonstration**

No words can describe the spectacular performance of Penetred Skid-Control . . . only your foot on the Brakes or on the Gas can tell the story, for there is nothing in the world that gives you the "Feeling of Security" that Penetred gives you all year 'round . . . so get a Free demonstration today . . . in the meantime write for "The MIRACLES of Penetred."



ASK ANY TIRE SERVICE STATION ABOUT "PENETRED"

PENETRED CORP. MARSHFIELD WISCONSIN



# DU PONT ANTI-FREEZES CAN BE PRE-MIXED!



*A fact that'll save  
ye money, mon!*

And it will cut operating costs, save time, too. Both "Zerone" and "Zerex" mix completely with water in all proportions. Their special Du Pont chemical rust inhibitors will not separate from solution while standing. That means you can make up a

pre-mix of properly proportioned solution and have it constantly on hand for replacing cooling system losses. With a pre-mixed solution of Du Pont Anti-freeze you avoid wasting your money by pouring into your radiators more anti-freeze than you need.



*Order Your  
Du Pont Anti-Freeze  
Now!*



## DU PONT "ZERONE"

REG. U.S. PAT. OFF.

**America's great money-saving anti-freeze**



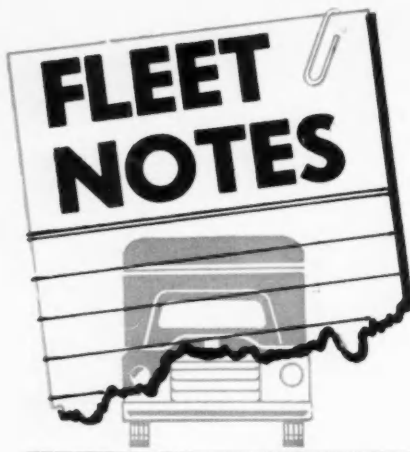
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

## DU PONT "ZEREX"

REG. U. S. PAT. OFF.

**The outstanding premium anti-freeze**



H. P. Welch Co., Sommerfield, Mass., opened a new truck terminal in West Springfield, Mass. The company is celebrating its 50th anniversary.

Scherer Freight Lines, Inc., Ottawa, Ill., moved into its new Chicago terminal. The dock will accommodate 56 trucks at one time; 25 can be loaded inside the building under cover.

All States Freight, Inc., Akron, Ohio, opened new terminal in Baltimore, Md.

North American Van Lines, Inc., Fort Wayne, Ind., announced a record 1952 hauling revenue of \$16,345,572, a gain of 40.7 per cent over 1951.

Pacific Intermountain Express, Oakland, Cal., has started operations at its new Las Vegas, Nev., terminal and has established a branch terminal at Provo, Utah.

Virginia - Carolina Transportation Co. and Eastern Terminals, Inc., have new terminals under construction for their use in Philadelphia.

Consolidated Freightways, Portland, Ore., had a .96 claim ratio for 1952 as compared to 1.18 in 1951.

Watson Bros. Transportation Co., Omaha, Nebr., has inaugurated a seven card draw poker safety contest. Each week, each no-accident city driver draws from a deck of cards. At the end of the seven-week period, the best five-card poker hand wins the prize.

U. S. Truck Co., Inc., Detroit, has ordered 25 Trailmobile, 34-ft trailers with 9-ft spread tandems.

Aero Mayflower Transit Co., Indianapolis, Ind., is celebrating its 25th anniversary.

R. C. Motor Lines, Jacksonville, Fla., also is marking its quarter century birthday.

Branch Motor Express Co., New York City, for the third year has won the Liberty Mutual Insurance Co.'s plaque for "outstanding achievement in cargo loss prevention."

Interstate Motor Freight System, Grand Rapids, Mich., had a 1952 claim ratio of 1.01 as compared with 1.14 for 1951.

Adley Express Co., New Haven, Conn., is now two-time winner of Liberty Mutual Insurance Co.'s plaque for "outstanding achievement in cargo loss prevention."

Harris Express, Inc., Charlotte, N. C., won the Grand Slam award and plaque for "outstanding achievement in cargo loss prevention" from Liberty Mutual Insurance Co. Harris's Grand Slam award resulted from being tops in vehicle accident, personal injury and cargo loss and damage prevention.

Wooster Express, Inc., Hartford, Conn., now has a new terminal under construction at Long Island City, N. Y.

Watson Bros. Transportation Co., Omaha, Nebr., reports a 40 per cent drop in accident frequency in the past four years.

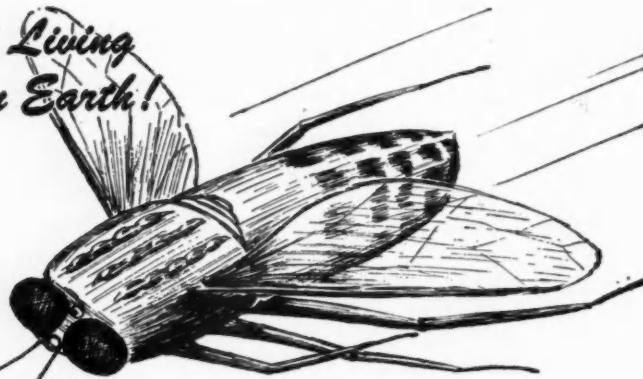
Intercity Transportation Co., Brockton, Mass., has a new terminal in the Long Island area as a center for its New York and New Jersey operations.

Luper Transportation Co., Tulsa, Okla., expects to have its new home office and terminal completed about July 1.

Chippewa Motor Freight, Inc., Bloomer, Wis., has opened its new, larger Chicago terminal.

Middle States Motor Freight, Inc., Cincinnati, Ohio, has acquired new general offices and terminal at 2955 Central Parkway.

*The Fastest Living Thing on Earth!*



**818 MILES PER HOUR**

The unbelievable speed of 400 yards per second by the Deer Botfly.

## BARTLETT HYDRAULIC 5th WHEEL

*The Fastest Dock Spotter!*  
and with less effort, too!



This BARTLETT Speedy Helper Will: Spot in 5 Minutes instead of 20 . . . Cab Controlled—it saves driver's time climbing in and out of cab to wind up legs . . . Save valuable inches by closer dock parking . . . Guaranteed to cut spotting manpower —Pays for itself in ninety days . . . Sturdily Built to Minimize Maintenance . . . Lifts up to 50,000 lbs. 14 inches High.



These Units Shipped Anywhere for Local Installation on any make Tractor.

Adapter Pin for Full Automatics available—Swings out of the Way.

### AMONG THE MANY USERS:

Burlington Truck Lines  
Consolidated Freightways  
Darling & Company  
East Texas Motor Freight  
Fleet Maintenance  
Fruit Belt Motor Service  
Gordons Transport  
Hines Lumber Company  
Huber & Huber  
Interstate Motor Lines

The Kroger Company  
Kasham Cartage  
Liberty Trucking Co.  
Mid-States Freight Lines  
National Tea Co.  
Norwalk Truck Line  
Pacific Intermountain Express  
Pearia Cartage Co.  
Scherer Freight Lines  
The Willett Company

## BARTLETT TRAILER CORPORATION

3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1160

WORLD'S NEWEST, SAFEST AND MOST ECONOMICAL BRAKE DRUM—

# The Copperweld TRADE MARK BRAKE DRUM

PROVED BY 30-MILLION MILE ROAD TEST

The new, revolutionary Copperweld\* Brake Drum is the first practical answer to the multiple problems of safety, economy and efficiency in the operation of heavy-duty trucks and buses. It's designed to provide sure, safe stops for a longer period than any other drum—and at lower overall costs.

For example, one leading fleet operator reports his Copperweld Brake Drums outlasted conventional types by more than 6 to 1. His test, in heavy-duty service, covered 30 million brake drum miles over a 3-year period. He reports brake drum life was increased from 50,000 miles per drum to better than 300,000 miles by the use of Copperweld Brake Drums. Brake lining life soared from around 40,000 miles to more than 160,000 miles per lining. And there was not one single case of "fading" or "bell-mouthing."

Think of the tremendous savings in maintenance costs that Copperweld Brake Drums make possible because fewer replacements of drums and linings are required. What's more, vehicle "down-time" is absolutely minimized, and accident rates are reduced with a consequent savings on insurance premiums. And remember, for lowest braking costs with greatest safety and efficiency, nothing even closely approaches Copperweld Brake Drum performance. Specify Copperweld Brake Drums on all your new equipment and replacements.

\*Trade Mark

*Want More Facts  
and Operating Data?*

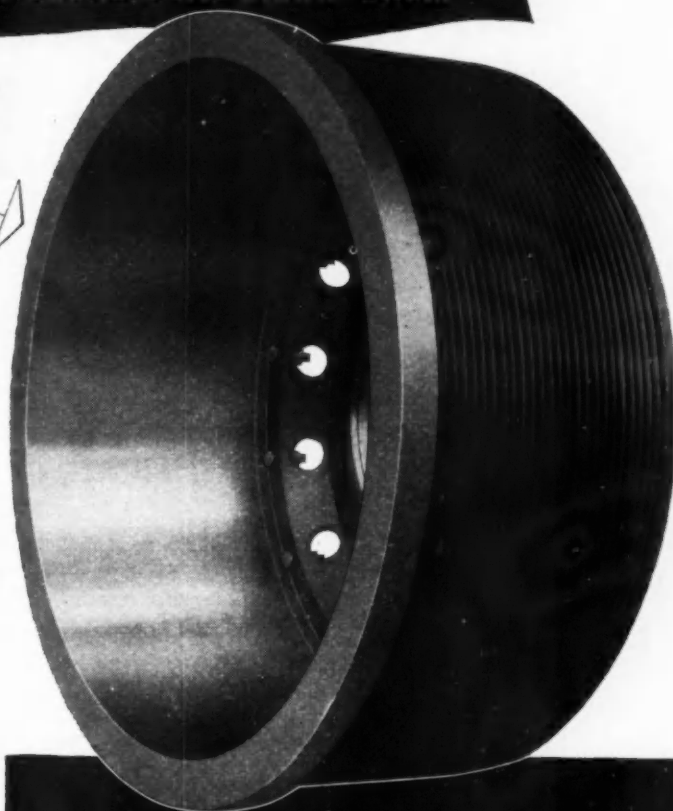
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BRAKE DRUM DIVISION

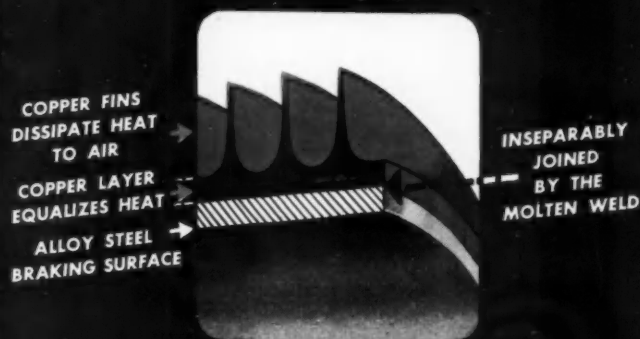
**COPPERWELD STEEL COMPANY**

Glassport, Pa.

OTHER DIVISIONS: WIRE AND CABLE, Glassport, Pa. • FLEXO WIRE, Oswego, N. Y. • ARISTOLOY STEEL, Warren, Ohio



## NEW HEAT-DISSIPATING DESIGN



## COPPERWELD Provides All These Advantages:

- Greater Safety Because of Cooler Temperatures
- Lower Maintenance Costs Because Fewer Replacements of Drums and Linings Are Required
- Uniform Braking Effect—No "Fading"
- Virtual Elimination of Harmful Heat Checking
- Less Wear on Linings and Drums
- Less Distortion
- No "Bell-Mouthing"
- Reduced Temperatures on Brake Parts, Wheel Bearings, Tire Beads, Lubricants and Running Gear
- Longer Service Life
- Greater Operating Economy

*Copperweld Products* SERVING MANY INDUSTRIES  
DEPENDABLY AND ECONOMICALLY FOR OVER 38 Years



# cuts road delays cuts belt costs

Like Be-Mac Transport Co., Inc., whose letter is shown here...fleet operators from coast to coast have stated in writing that the Gates "T" Belt—specially engineered for trucks and buses—makes them money in two important ways:

**1.**

Road delays caused by belt failure are practically eliminated...trucks keep on schedule...shipments arrive on time...net operating time is kept UP—revenues and profits are increased.

**2.**

Belt replacement costs are cut way down by the longer service life to the Gates "T" Belt. Actually—according to Fleet Managers, Purchasing Agents, Maintenance Superintendents—belt replacement costs are cut from 50% to 80%.

With other costs rising, there is more reason than ever to use cost-cutting, money-making Gates "T" Belts. There are Gates Belt Jobbers in every distributing center who can supply you promptly with the belts you need. The Gates Rubber Co., Denver, U.S.A.—World's Largest Maker of V-Belts.

**Be-Mac**

Gates Rubber Company  
Denver 17,  
Colorado

**TRANSPORT CO., INC.**

GENERAL OFFICES  
14TH AND Q FALLON STREETS  
ST. LOUIS 6, MO.

Gentlemen:

After exhaustive tests on all makes of belts, we want to tell you that we have decided on Gates. Our cost of operation is at least 50% less and our road failures have been completely eliminated.

We would also like to advise you that your Vibra-flex hose has completely stopped all radiator breakage due to excessive vibration.

Yours very truly,

BE-MAC TRANSPORT CO., INC.

*Bob Lemen*

Bob Lemen  
Superintendent of Maintenance

BL:ep

## GATES TRUCK & BUS V-BELTS



The Mark of Specialized Research

tough, multiple-ply cover developed by world's largest maker of V-Belts

built with rayon cords—the same kind used to increase life of Truck Tires

*Gates*

**TRUCK & BUS  
V-BELT**

Specially Engineered  
FOR TRUCK AND BUS USE

**143-T**

For Truck and Bus Use Only

**Look for  
this T\***

To get 50% to 80% more service out of fan belts look for this "T" on both label and belt. The "T" is your insurance of a belt specially engineered for Trucks and Buses.

\*Reg. U.S. Pat. Off.

...Harve  
eral man  
Girardeau  
...Edwa  
to the vic  
Transport  
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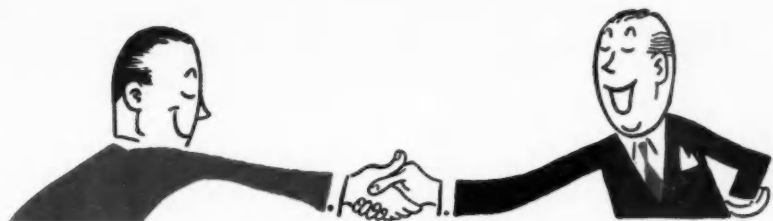
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Taylor,  
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...J. P.  
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...Euge  
N. C., re  
Chrysler  
...Fred  
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...R. W  
Central  
Wheeler  
counts, f  
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York Cit  
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COMMER



## INTRODUCING ...

...Harvey E. Henry, as assistant general manager, Kimbel Lines, Inc., Cape Girardeau, Mo.

...Edward J. Smith, as special assistant to the vice president, P. B. Mutrie Motor Transportation, Inc., Waltham, Mass.

...D. Miller, as supervisor of drivers and safety, Gillette Motor Transport, Inc., Dallas, Texas.

...Thomas D. Taylor, president, Freightliner Corp., Portland, Ore.



...Fred Kuckuk, as general freight claim agent, Tarbet Trucking, Inc., Muncie, Ind.

...Robert M. Gmelich, as general manager, Corey and Evans, Inc., DeKalb, Ill.

...J. P. Carpenter, as vice president and operations manager, Harris Express, Inc., Charlotte, N. C.



...Christopher F. Hammond, Jr., president, The Steel Products Co., makers of Great Dane trailers, Savannah, Ga.

...Eugene W. Thrasher, as Greensboro, N. C., regional manager, Dodge Division, Chrysler Corp., Detroit.

...Fred J. Hartley, as southeastern territory special hoist representative, Harnischfeger Corp., Chicago.



...R. W. Allen, left, vice president and Central division manager, and D. C. Wheeler, right, manager, National Accounts, fleet and bus sales, Southwestern division, Mack Motor Truck Corp., New York City.



...Charles Gilmore, as vice president in

charge of operations, Sente Trucking Corp., Toledo, Ohio.

...J. Howard Dunn, Cleveland sales development and engineering division, Aluminum Co. of America, Pittsburgh, Pa.



...William J. Bird, as general sales manager, Plymouth Motor Corp., Detroit.

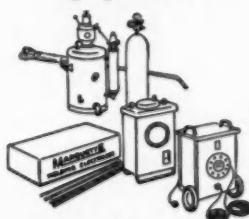
...Ray H. Brundidge, as vice president, Columbia Terminals, Inc., St. Louis, Mo.  
(TURN TO PAGE 196, PLEASE)

# MARQUETTE

## ROARS TO SIXTH WIN AT INDIANAPOLIS "500"!

Memorial Day Race... 1953. Mile after mile of grinding, twisting, swerving. Death lurking at every turn—at the least break or failure in any vital metal part. And every Marquette weld held tight.

In six years, over 4,000 Marquette welds have been made. Not one has ever failed. That's why, with seconds and lives at stake, Marquette is the official choice at Indianapolis. You can depend on Marquette welding and battery charging equipment, too!

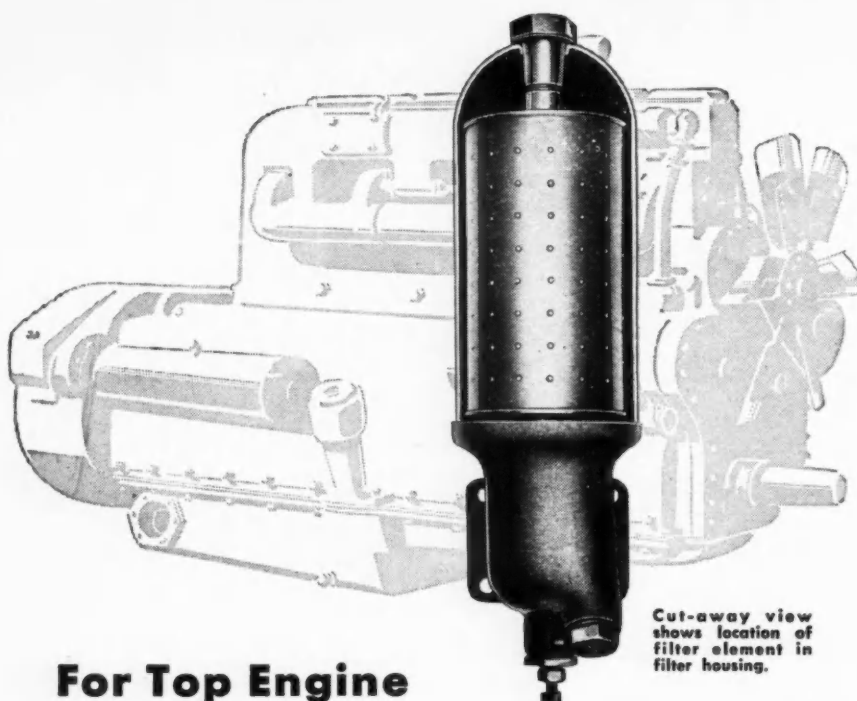


# MARQUETTE

## Welding & Automotive Service Equipment

Welding Electrodes and Rods, ARC and Oxy-Acetylene  
Welding Equipment, Battery Chargers, Tow Cranes

Marquette Manufacturing Co., Inc. • 307 E. Hennepin Ave. • Minneapolis 14, Minn.



## For Top Engine Performance — Longer Life — and Less "In-the-Shop" Expense — Use **MICHIANA FILTERS**

Operating costs are reduced through the use of reliable oil filters of adequate capacity. The engine is kept clean and performance improved for many extra hours of service. "In-the-shop time" is reduced to a very minimum.

MICHIANA Oil Filters have been in use for over a quarter century—they protect millions of horsepower of engine capacity today and are highly regarded by experienced engine builders, and by truck and bus operators whose records reveal the many advantages of MICHIANA Filters.

MICHIANA Filters are made for all types and sizes of internal combustion engines,—gasoline and Diesels. Write for Bulletin 839.

**MICHIANA PRODUCTS CORPORATION**  
Michigan City, Indiana

**MICHIANA  
OIL FILTERS**



To insure maximum efficiency and protection, always use MICHIANA Replaceable Elements.

## Introducing . . .

Continued from Page 195

... Paul E. Deal, as zone operating manager with headquarters in Dallas, Texas, and Bert Christopher and Alfred E. Vogt, as district managers in Kansas City and Oklahoma City, respectively, The B. F. Goodrich Co., Akron, Ohio.

... Roger S. Pyne, as vice president in charge of the Machine Tool Division, and Wilbur Hyland and Norman J. Leary, as division managers in Omaha and Cleveland, respectively, Van Norman Co., Springfield, Mass.

... Howard P. Strother, assistant to the vice president in charge of sales and assistant wholesale manager, The White Motor Co., Cleveland, Ohio.



... Lou C. Doss, as southern sales division manager, Trailmobile, Inc., Cincinnati, Ohio.

... W. A. Mattie, as general manager, Heater Division, Eaton Mfg. Co., Cleveland, Ohio.

... Edward L. Kraft, as sales manager, Durite Products, Chemical Division, Borden Co., Philadelphia.



... George C. Somes, Jr., sales promotion and merchandising manager, Standard Pressed Steel Co., Jenkintown, Pa.

... R. G. Myers, as southwestern district manager, Davey Compressor Co., Kent, Ohio.

... Robert W. Jones, as vice president and general manager, Trans-Main Corp., Kent, Ohio.

... William C. Mueller, advertising manager, Dole Refrigerating Co., Chicago.



... Ross R. Dunn, as vice president and director of sales, Hastings Mfg. Co., Hastings, Mich.

... Edward Gray, as assistant to the general manager, coach and aircraft division, The White Motor Co., Cleveland, Ohio.

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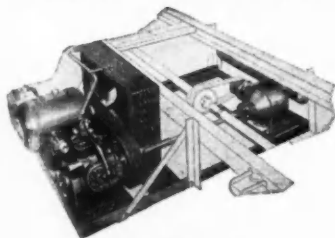
June, 1953



## opens the door to truck refrigeration profits too!

Just as it takes the right combination to open a safe, it also takes the right combination of equipment to get the top dividends from truck refrigeration. That's why Kold-Hold gives you your choice of several different truck refrigeration combinations to provide a method of refrigeration that is just right for each special problem. These Kold-Hold systems will maintain pre-determined low temperatures in your trucks with any degree of automatic operation desired. They can be fully automatic and thermostatically controlled or they can be semi-automatic requiring overnight hook-up to an electric outlet or a cooling system. One of these systems, properly engineered to your needs, can pay for itself in longer trips, reduced handling, increased customer satisfaction and elimination of spoilage losses.

## KOLD-HOLD can answer any refrigeration problem!

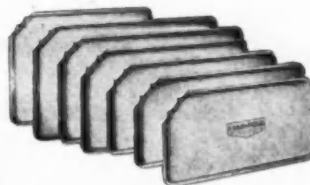


KOLD-TRUX

Which do you prefer . . . Mobile or Hold-Over truck refrigeration? Kold-Hold can give you either or a combination of both.

When your weather worries start, pick out the routes with the biggest refrigeration problems and call on Kold-Hold to give you a satisfactory solution. They will give you the right combination for your needs from such highsides as the Kold-Trux Mobile Unit, a mounted compressor, or make-and-break assemblies, coupled to such lowsides as Kold-Hold Hold-Over Plates, Thin Plates, Serpentine Quick-Action Plates, or Blowers.

Why not give us the details of your problems and let our engineers find the most efficient solution for you. Write today for details.



HOLD-OVER PLATES



Tell us your truck refrigeration problems and send now for complete data and literature.

## KOLD-HOLD

**NOW**

**for Limited Time Only!**

**PERMACEL<sup>®</sup>**  
**P8 UNIVERSAL MASKER**

**1/2 PRICE**

with the purchase of  
2 bulk cases of PERMACEL Masking Tape  
and 6 rolls of PERMACEL Masking Paper



Regular price for Masker ~~\$29.95~~  
Sale price to you — **NOW \$14.98**

NOTE...Masker Deal orders shipped  
direct, invoiced by your jobber.

**Call your jobber right now!**

INDUSTRIAL TAPE CORPORATION • NEW BRUNSWICK, N. J.

## Introducing . . .

Continued from Page 196

... John R. Feinen and Henry Pruch, as sales managers in the West coast and New England divisions, respectively, Kendall Refining Co., Bradford, Pa.

... Cecil E. Fausch, as midwestern states supervisor, and Lloyd C. Hanson, North Central regional representative, National Highway Users Conference, Washington, D. C.

... Edward J. Connors, advertising and sales promotion manager, Standard-Thomson Corp., Dayton Ohio.



... Edward R. Staske and John R. Kix, as district representatives in the Chicago and Philadelphia areas, respectively, Radiator Specialty Co., Charlotte, N. C.

... Clifford Bailey, as vice president, California Cartage Co., Los Angeles, Cal.

... D. J. Byrd, as assistant sales manager, Wayne Division, Car Wood Industries, Inc., Wayne, Mich.



... A. E. Wilson, sales engineer, The Timken-Detroit Axle Co., Detroit.

... H. W. Jahn, as assistant sales manager, Transport Trailers, Inc., Cedar Rapids, Iowa.

... Joseph Halperin, as general manager and general sales manager, Aeroil Products Co., Inc., South Hackensack, N. J.

... Richard E. Jacobs, as Detroit area representative, Ross and White Co., Chicago.

... N. W. Seidel, vice president in charge of sales, Fargo Division, Chrysler Corp., Detroit.



... Jack I. Pope, Henry A. Nichols, Howard Price, John Havelka, H. C. Stivers and D. S. Bruce, as territory managers, and Michael Tidd, Robert Abodeely, George Heaton and H. B. Turner, as territory representatives, The AP Parts Corp., Toledo, Ohio.

(TURN TO PAGE 200, PLEASE)

# Borden cuts dead weight two tons with truck bodies built of **ALUMINUM**



Because the Borden Company of New York City draws the line at wasting gas dollars to haul dead weight, bodies for their 66-truck fleet are built with Alcoa Aluminum instead of steel. Constructed by York-Hoover Corporation, York, Pa., loading area and insulating features are not changed. Yet the aluminum bodies weigh only 2,300 pounds compared with 4,710 pounds for steel. And since the bodies are lighter, chassis can be smaller. The net result is a two-ton reduction in dead weight.

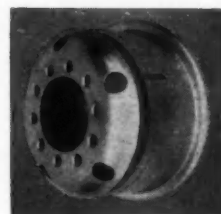
As the tare dropped, so did fuel consumption and tire wear. But that's not all—elimination of rust streaks, minimized corrosion and the simplicity of body repairs add up to other important savings in maintenance.

Alcoa offers helpful counsel on design and construction of aluminum bodies. You and your truck manufacturer can take advantage of this assistance, just by calling your Alcoa sales engineer.

## ATTENTION BODY BUILDERS

Write today for Alcoa's new 72-page booklet on the engineering considerations and fabrication methods for building truck bodies of Alcoa Aluminum, including data on the wide range of stock, extruded shapes, sheet and plate, and body parts carried in stock by Alcoa distributors. Aluminum Company of America, 1876-F Alcoa Bldg., Pittsburgh 19, Pa.

Increase  
your tire  
mileage with  
Alcoa Forged  
Disc Wheels



**Lightweight!** Alcoa Forged Aluminum Disc Wheels weigh 32 to 50 pounds less per wheel than corresponding steel wheels. Your saving in unsprung weight means reduced wear and tear on chassis and tires.

**True Running!** Alcoa Forged Aluminum Disc Wheels are precision-made, machined to close tolerances. Results—better balance, truer running qualities. You get easier steering, longer tire life, a smoother ride.

**Rapid Heat Dissipation!** Tire temperatures are kept lower because one-piece Alcoa Forged Aluminum Disc Wheels conduct heat rapidly away from tires. Result—tires run cooler, give much greater mileage.

# Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

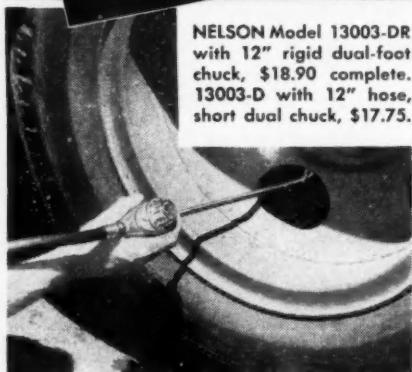


*Save Time  
Save Tires*

WITH

**NELSON  
EQUAMATIC\*  
INFLATORS**

NELSON Model 13003-DR with 12" rigid dual-foot chuck, \$18.90 complete. 13003-D with 12" hose, short dual chuck, \$17.75.



**SAVE TIME . . .** just dial correct pressure, press chuck on tire valve stem; the NELSON "flips its own switch" when right pressure is reached. It's easy, it's fast—no gauge watching, no valving off!

**SAVE TIRES . . .** you get exactly equal pressures in each pair or set of tires, automatically! No "unbalanced" inflation to cause shimmy, hard steering, uneven tire wear. NELSON accuracy is *tops*; easiest inflator to keep accurate . . . recalibrate it right on air line! Get extra tire mileage by maintaining exact pressure recommended by manufacturer.

**LOW COST . . .** the NELSON costs little to buy, nothing to install, practically zero to maintain! It's simple, rugged; full year's service guarantee!



**ADDED SAFETY . . .** with Model 13003-S, grip chuck locks on stem. You just dial correct pressure, lock chuck on stem. Step aside, out of danger if loose rim lets go. Price complete, \$17.95.

**START SAVING NOW . . .** order from your jobber or write us today for free literature.

**BARMATIC  
PRODUCTS  
INCORPORATED**

440  
PERALTA AVENUE  
SAN LEANDRO,  
CALIFORNIA

\* EQUAL pressure in each pair of tires — AUTOMATICALLY!

3

## Introducing . . .

Continued from Page 198

... J. S. Fuller, as special coach sales manager, The Flexible Co., Loudonville, Ohio.

... Michael J. McCormack, as vice president and general sales manager, Breeze Corps., Inc., Newark, N. J.

... Robert G. Chelton, as sales manager, Alkon Products Corp., New York City.

... Theodore E. Metz, advertising manager, Federal Fawick Corp., Cleveland, Ohio.



... John D. Williams, as vice president and general manager, Rollway Bearing Co., Inc., Syracuse, N. Y.

... Frank E. Phillips, as senior vice president, and William A. Blume, as vice president in charge of sales, Gemmer Mfg. Co., Detroit.

... Ted E. Fenker, as service manager, National Lift Co., Ypsilanti, Mich.



... Roger O. Bay, sales manager, Tool Division, Bonney Forge and Toll Works, Allentown, Pa.

... James C. Morrison, as Detroit plant manager, Federal-Mogul Corp., Detroit.

... Ed Lester, as central western district manager; W. H. Courtright, as special eastern representative, and Fred J. Fandrei, as middle Atlantic states district manager, Maremont Automotive Products, Inc., Chicago.

... Walter C. Smart, vice president in charge of sales, Twin Coach Co., Kent, Ohio.



... R. H. Tomlinson, as central-southern regional representative, Galion Allsteel Body Co., Galion, Ohio.

... H. I. Nichols, as sales engineer and design counselor, Carry-All Division, Morrison Steel Products, Inc., Buffalo, N. Y.

... A. D. Sullivan, as vice president in charge of engineering, Brunner Mfg. Co., Utica, N. Y.

## CHAMP-ITEMS

# TROUBLE SHOOTERS

Help Your Service!



Champ-Items are time savers—money makers for every shop. When you are having service trouble, you'll find a Champ-Items Trouble Shooter to help you lick it. Send for Champ-Items Catalog No. 53 featuring more than 200 Automotive Replacement Parts.

**No. 600 SERIES UNIVERSAL STUDS** for manifold, transmission, and motor repairs for all cars, trucks and tractors. Made of high tensile steel heat treated. U. S. S. and S. A. E. threads 1/4" to 7/16" diameter and 1" to 4" long. List 15¢ per stud.

**No. 600 STUD ASSORTMENT** contains 126 studs—25 different sizes in metal box.

**No. 636 AUTOBODY TRIM AND FENDER SCREWS** for all cars and trucks. Hex. head slotted—washer face—cadmium plated—10 popular sizes for all general purposes; slotted for fast assembly; washer face for secure fastening. List 2¢ to 6¢ each.

ORDER FROM  
YOUR JOBBER



**CHAMP-ITEMS, INC.**  
6191 Maple Ave., St. Louis 14, Mo.

COMMERCIAL CAR JOURNAL, June, 1953

June

Driver of

S. R. B. Nev., a tractor Garrett from Idaho, has "Year" for 1953 ing Assns. children and of Local Brotherhood Burkholder 1,500,000 m since he beg an average Burkholder over contest country wh nominated in their own State Drive judges, in phasized the by Burkholder trying to re life, a New burning aut 40 near Re The judg mention aw of Racine, Transport C chargeable driving. M two childre

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COMMERCIAL

## June Roundup

Continued from Page 62

### Driver of the Year

S. R. Burkholder, 43, of Sparks, Nev., a tractor, semi-trailer driver for Garrett Freightlines, Inc., Pocatello, Idaho, has been named "Driver of the Year" for 1952 by the American Trucking Assns. He is married and has two children and a grandchild. A member of Local 533 of the International Brotherhood of Teamsters at Reno, Burkholder has driven more than 1,500,000 miles without an accident since he began driving a truck in 1925, an average of 55,000 miles a year.

Burkholder won the coveted honor over contestants from all parts of the country who, like himself, had been nominated by the trucking associations in their own states after winning the State Driver of the year award. The judges, in selecting Burkholder, emphasized their choice had been dictated by Burkholder's extreme heroism in trying to rescue, at the risk of his own life, a New York family of six from a burning automobile last year on Route 40 near Reno, Nevada.

The judges also gave an honorable mention award to John A. Jacobs, 57, of Racine, Wis., driver for Service Transport Co., Racine, who has had no chargeable accidents in 28 years of driving. Mr. Jacobs is married and has two children.

### New NCPMTO Head

James D. Mann, currently with the Department of Justice, has been appointed Managing Director of the National Council of Private Motor Truck Owners, Inc., effective May 11, 1953. He was, for many years, connected with the National Industrial Traffic League and during the war, served as an officer in the United States Naval Reserve.



### Maintenance Course

To help the New Jersey motor fleetmen, Rutgers University, New Brunswick, N. J., will provide a week's school on maintenance problems, Sept. 28-Oct. 2. Emphasizing preventive maintenance for buses, trucks, and trailers, the five-day program will cover inspection and maintenance of brakes, steering wheels, cooling system, transmissions and clutches, axles, ignition, wir-

ing, engines, carburetors, wheels, bearings, pistons, cylinders, fuels and oils. A nearby maintenance shop will be used in connection with the lectures to provide experience in detecting trouble spots.

### H. C. Fruehauf Retires

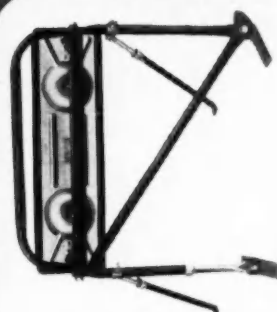
Retirement of Harvey C. Fruehauf, Chairman of the Board of Directors, Fruehauf Trailer Co., Detroit, since 1949, has been announced. He will continue to serve as a Director and will hold the title of Honorary Chairman of the company.

### Trailer Interchange

After an informal opinion from W. Y. Blanning, Interstate Commerce Commission Bureau of Motor Carriers director, that interchanged trailers would have to be returned to the interchange point "with dispatch" without regard for freight under the proposed ICC leasing regulations, two common carriers petitioned ICC to make certain the regulations would not interfere with trailer interchange. A similar request was made in a letter to Blanning by ATA's Munitions Carriers Conference.

(TURN TO PAGE 204, PLEASE)

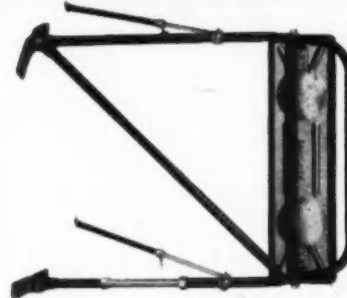
## YOU'VE NEVER SEEN IT SO GOOD . . .



MODEL 9908  
FOR CAB-OVER-ENGINE TRUCKS



9000M  
MIRROR HEAD



MODEL 9808  
FOR STANDARD TRUCKS

## AS WITH THE MIRO-FLEX NEW HEAVY-DUTY TRUCK MIRRORS

Here's a new number in the famous Miro-Flex line of truck mirrors that has received enthusiastic acceptance from operators and fleet owners wherever it has been shown. This mirror has been engineered and designed for the "big boys" who demand an extra-heavy, extra-braced mirror that will stay put in any position. With the Miro-Flex 9800 series for standard trucks, and the 9900 series for cab-over-engine trucks, you can see better and quicker and know what's coming. Both use the dependable triple-plated 18" mirror head, which has enjoyed immense popularity throughout the country. The "U" arms permit adjustment to any position, and the mounting brackets enable easy installation on all makes of trucks.

### Adapting Brackets for the 9800 and 9900 Series of Mirror Assemblies

Top Bracket for all GMC, Chevrolet, Dodge, Diamond-T, International, Ford and White 3000 series trucks.

No. 8

Top Bracket for Mack, White WC Models 28, 26, 22, 20, 16, and White Freightliner WF42 trucks.

No. 9

Is standard as Lower Bracket on all assemblies, and is used as the Top Bracket on Federal Kenworth, White Sterling, or any other cab with a square door.

No. 10



Write for Catalog and Complete  
Line of Miro-Flex Mirrors and Miro-Flares

**MIRO-FLEX COMPANY, INCORPORATED**

1824 EAST SECOND STREET—WICHITA 7, KANSAS



## June Roundup

Continued from Page 203

Blanning's reply to the letter said, "It is possible that some provision will be made . . .," expressed the opinion that, if the interchange agreement provides for return of the trailer to the owner and originating carrier in connection with any through movement of traffic, the leasing rules would not apply. (Latest Congressional action on

the proposed amendment to the ICC Act to permit leasing is reported on page 58.)

### New BPR Chief

Francis V. du Pont, new Commissioner of Public Roads, was recently interviewed and expressed a few ideas on the federal-aid highway program. Among them were:

He would try to obtain state highway administrators complete support of the federal government's highway program.

That while all highways cannot be built to maximum standards, the maintenance of the interstate highway network is essential.

General highway revenues should be distributed primarily in sparsely populated areas where user tax collections are insufficient to support the basic needs for intercity roads.

There would be no need for a new study of highway user cost allocation as he doubts it would prove anything or would the result be accepted by all groups concerned.

The question of whether commercial users paid a fare share of highway costs was a matter to be determined by legislators in individual states.

du Pont also expressed opposition to construction of secondary roads with large portions of federal aid and to the earmarking of highway user revenues for road purposes, comparing the latter to the use of alcohol taxes for the benefit of alcoholics.

### Highway Management

The Department of Commerce has announced that the consultant firm of Booz, Allen and Hamilton is making a management survey of the Bureau of Public Roads as the first step in a review of the federal-aid highway program.

### Fruehauf VP Dies

F. M. Reid, vice president in charge of engineering, Fruehauf Trailer Co., Detroit, died suddenly on May 11. A member of the company's board of directors, Reid was at Fruehauf for over 30 years.

### N. Y. Ton-Mile Tax

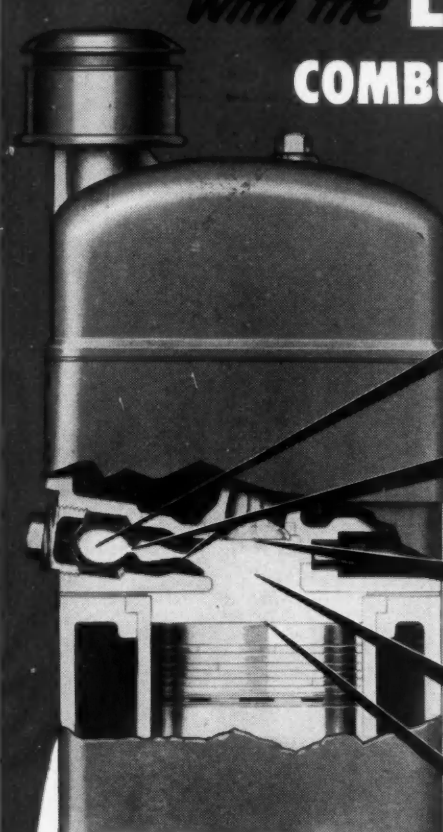
Effective July 1, 1953, the exemption from the New York ton-mile tax for vehicles operated exclusively within the incorporated limits of a city or village, or Public Service Commission zone is abolished. Permission to file truck mileage tax returns on a quarterly basis is revoked effective June 30, 1953.

### Pennsylvania Weight

In Pennsylvania, the Joint State Government Commission has recommended an increase in the presently permitted GVW. Present axle weight limits of 20,000 lb for single axles and 36,000 lb for tandem axles would be retained, but a formula is set-up to allow 58,500 lb GVW for a single-axle tractor and tandem-axle semi-trailer combination and 61,500 lb GVW for a tandem-axle tractor and tandem-axle semi-trailer combination. The proposed new limit for single-axle tractor and single-axle

(TURN TO PAGE 206, PLEASE)

*Why it pays to buy a diesel*  
with the **LANOVA**  
**COMBUSTION SYSTEM**



The Lanova Combustion System provides a scientifically engineered combustion chamber designed to insure better, more efficient utilization of fuel in the development of useful power. It —

- ISOLATES LIFE-SHORTENING PRESSURE BLOWS**  
by absorbing peak combustion pressures in the heavy-walled Lanova energy cell where they can't slam down on rings, pistons, pins and bearings.
- TIMES AND CONTROLS WORKING PRESSURES**  
through specially designed orifices to insure the maximum "push" at a favorable crank angle and throughout the full degree of the power stroke.
- KEEPS VALVES FREE AND CLEAN**  
by maintaining high combustion efficiencies and eliminating the likelihood of dirty exhaust and carbon impairing effective valve sealing.
- PROVIDES EXTRA FUEL ECONOMY**  
by thoroughly mixing fuel with the air needed for full combustion — thus getting more power from every drop of fuel used.
- MINIMIZES PISTON AND RING TROUBLES**  
by directing the blast of hot gases from the energy cell away from the piston, insuring cooler pistons, better lubrication and less ring trouble.

Many leading makes of diesels have incorporated the Lanova Combustion chamber design. You'll always recognize them by looking for the characteristic Lanova energy cell design.

**Lanova**

**Write for the Lanova Handbook**  
It has full details on why combustion is so important in efficient Diesel operation and how the Lanova Combustion System insures better combustion.

**LANOVA CORPORATION**  
Dept. 1, 38-15 30th Street, Long Island City 1, N. Y.

One of America's foremost names in diesel research and development



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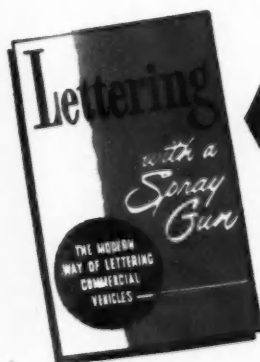
June, 1953



## A Better Way at Lower Cost...

**ONLY DICKS GIVES YOU 6 DIFFERENT MATERIALS FOR EVERY TYPE OF SPRAY-GUN LETTERING**

Here's the way—the best way—to get maximum value from your vehicle advertising . . . Six different materials, exclusive only with DICKS, originator and largest manufacturer of "spray-gun" lettering systems, guarantee you the exact method for clean, sharp, uniform, eye-stopping identification on every vehicle surface regardless of finish. While the DICKS' method is the finest ever developed . . . it costs you 20% to 50% less.\* Why is this so? Because it is permanent . . . keeps your vehicles on the job longer . . . requires no skilled labor . . . any man in your shop can do the work quickly and perfectly! Keep your vehicles out of the shop and on the road—earning! Contact us for full details on your specific needs.



Write for free booklet,  
"Lettering With A  
Spray Gun."

\*25 units or more

# G. O. DICKS CO

**READY-CUT PAPER MASKS**

**FOR SPRAYING DESIGNS**

SINCE 1934

DETROIT 28, MICH. • MONROVIA, CAL. • CHICAGO 3, ILL. • PLAINFIELD, N. J.  
8850 HUBBELL STREET 327 W. MAPLE 7 SOUTH DEARBORN 124 LAFAYETTE PLACE

COMMERCIAL CAR JOURNAL, June, 1953

## June Roundup

Continued from Page 204

semi-trailer combinations under the formula would be 48,000 lb GVW.

Although up to press time no specific bill incorporating the recommended changes had been introduced, another bill, HB 1034, was pending and could be amended in committee in line with the legislative committee's proposals.

## 1953 Domestic Truck Factory Sales by G.V.W.\*

|                             | 5,000 lb. and less | 5,001-10,000 | 10,001-14,000 | 14,001-16,000 | 16,001-19,500 | 19,501-26,000 | Over 26,000 | Total   |
|-----------------------------|--------------------|--------------|---------------|---------------|---------------|---------------|-------------|---------|
| January.....                | 47,234             | 19,101       | 3,669         | 12,622        | 3,344         | 8,271         | 3,638       | 97,879  |
| February.....               | 40,616             | 16,600       | 3,087         | 11,068        | 3,409         | 7,621         | 3,811       | 86,212  |
| March.....                  | 55,910             | 22,798       | 5,568         | 19,354        | 4,776         | 9,067         | 4,550       | 122,043 |
| Total—Three Months—1953.... | 143,760            | 58,499       | 12,344        | 43,044        | 11,529        | 24,959        | 16,999      | 306,134 |
| Total—Three Months—1952.... | 96,639             | 48,051       | 14,965        | 52,186        | 12,603        | 25,852        | 12,763      | 263,264 |

\* Automobile Manufacturers Association.

### Truck Price Drop

A reduction in the retail prices of its light, medium, and light-heavy duty R-line models of motor trucks has been announced by the International Harvester Co., Chicago. Price reductions

cover the company's R-110, 120, 130, 150, 160, 170, and 180-model series. Downward price adjustments range from 3.5 per cent on the R-180 series to 10.6 per cent on the R-120 pickup models. The overall price reduction in these weight categories amounts to about 6.7 per cent.

### 1953 Truck Trailer Shipments

|  | March        | Three Months  |
|--|--------------|---------------|
| <b>Vans</b>                            |              |               |
| Insulated and refrigerated             |              |               |
| Steel.....                             | 73           | 200           |
| Aluminum.....                          | 241          | 859           |
| Furniture                              |              |               |
| Steel.....                             | 166          | 378           |
| Aluminum.....                          |              |               |
| All other closed-top vans              |              |               |
| Steel.....                             | 1,024        | 2,756         |
| Aluminum.....                          | 1,053        | 2,991         |
| Open-top                               |              |               |
| Steel.....                             | 187          | 454           |
| Aluminum.....                          | 192          | 490           |
| <b>Total—Vans.....</b>                 | <b>2,936</b> | <b>8,096</b>  |
| <b>Tanks</b>                           |              |               |
| Petroleum.....                         | 389          | 972           |
| Food.....                              | 25           | 90            |
| L. P. G.....                           | 16           | 32            |
| All other.....                         | 50           | 102           |
| <b>Total—Tanks.....</b>                | <b>480</b>   | <b>1,196</b>  |
| <b>Pole, Pipe &amp; Logging</b>        |              |               |
| Single Axle.....                       | 60           | 185           |
| Tandem Axle.....                       | 114          | 246           |
| <b>Total.....</b>                      | <b>174</b>   | <b>433</b>    |
| <b>Platforms</b>                       |              |               |
| Racks, livestock and stake.....        | 710          | 2,057         |
| Grain bodies.....                      | 94           | 330           |
| Flats, all types.....                  | 966          | 2,509         |
| <b>Total—Platforms.....</b>            | <b>1,770</b> | <b>4,896</b>  |
| Low-bed haulers.....                   | 363          | 885           |
| Dump trailers.....                     | 81           | 229           |
| All other trailers.....                | 479          | 943           |
| <b>Total—Complete Trailers.....</b>    | <b>6,283</b> | <b>16,678</b> |
| Converter dollies.....                 | 120          | 811           |
| Chassis only.....                      | 311          | 820           |
| <b>Total—Trailers and Chassis.....</b> | <b>6,714</b> | <b>18,309</b> |

### Tunnel Speeds

The New York Port Authority has announced that effective the first of (TURN TO PAGE 208, PLEASE)

### Trucktor's New Plant



The Trucktor Corp. is now located at its new plant on U. S. Route No. 22, Mountainside, N. J., 12 miles west of Newark. The new plant has ample facilities for machine shop work, storage of material and installation of the company's single and tandem trailing axle suspensions.

COMMERCIAL CAR JOURNAL, June, 1953



## DEMANDS *Quality* FASTENERS

The repair jobs you do are only as good as the nuts and bolts you use. Fastener failure inevitably reflects upon your repair work and leads to dissatisfaction among your customers.

So always play safe. Specify Lamson & Sessions automotive fasteners when you order from your jobber. They're "right" from every standpoint.



The **LAMSON & SESSIONS Co.**  
1971 West 85th Street • Cleveland, Ohio

Plants at Cleveland and Kent, Ohio • Chicago • Birmingham

WORLD'S LARGEST MANUFACTURER OF AUTOMOTIVE FASTENERS

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| Total | 97,879  |
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, June, 1953



# Hi-Range

## HYDRAULIC AXLE JACKS

*ready to deliver*

**Hi-Range** Hydraulics are a regular part of the AUSCO line. They're always readily available and never have to be put through on "special order". Hi-Range models have the same extra-engineering features as standard-model Ausco Hydraulics. That means, among others, they have an IMPROVED PRESSURE SEAL, EXCLUSIVE LEAK-PROOF AUSCO CASTINGS, SPECIAL NON-STICKING LEATHER CUP and FAMOUS AUSCO STRAIGHT-LINE OIL FLOW. Every Ausco Hydraulic is backed by Ausco's tremendous original equipment experience... 75% of all U. S. trucks provided at the factory with a hydraulic jack are Ausco-equipped. Ask your Ausco Jobber to show you AUSCO Hi-Range Hydraulic Axle Jacks or write for Data Bulletin.



- save labor, time and money
- up to 4" added lift
- eliminate blocking
- only a few cents higher than standard models
- available in 3, 5, 8 and 12-ton capacities

Standard-model Ausco Hydraulic Axle Jacks come in 1½, 3, 5, 8, 12 and 20-ton capacities.



B-158R

**AUTO SPECIALTIES MFG. CO.** DEPT. CC-6, ST. JOSEPH, MICH. Other Plants: Benton Harbor and Hartford, Mich.; Windsor, Ont., Canada.

COMMERCIAL CAR JOURNAL, June, 1953

207



## June Roundup

Continued from Page 206

this month the *minimum* speed in the Holland and Lincoln Tunnels as well as the 178 and 179th St. tunnels at the George Washington Bridge will be 20 mph.

### Explosives Warning

Warnings on the transport of explosives and other dangerous articles

by motor carriers have been distributed by the Interstate Commerce Commission, Bureau of Motor Carriers, in Philadelphia, as follows:

"In accordance with the regulations governing the transportation of explosives and other dangerous articles, the shipper of such material must describe the article in the shipping document by the shipping name used in section 72.5 of the regulations, must designate the type of label required, if any, and must certify that the description, packing and marking are in accordance with the regulations described

by the Interstate Commerce Commission. The waybill, manifest, dispatch, memorandum receipt, bill of lading, transfer sheet, or interchange record used for transferring such shipments to a connecting carrier must properly describe the articles and show the color of label applied.

"It has come to my attention that in some instances carriers are failing to properly describe shipments and show the color of label applied, in the billing used for transferring shipments to connecting carriers. While the failure of the originating or intermediate carriers does not relieve connecting carriers from any responsibilities, such failure may be one of the chief contributing causes of placarding violations.

"The necessity for strict observance of the regulations governing the transportation of explosives and other dangerous articles cannot be stressed too strongly."

### Los Angeles Truck Show

West coast operators will have an opportunity to see a full line at the fourth annual truck, trailer and equipment show at the Pan-Pacific Auditorium, June 18-21, Los Angeles, Cal.

### Safety Awards

Companies recently awarding their outstanding, safe drivers include:

Indianapolis Forwarding Co., Indianapolis, Ind.—to 60 drivers. Thirty-three of these have a total record of more than 10,000,000 miles of accident free driving.

Portland-Seattle Auto Freight, Inc., Seattle, Wash.—to 32 drivers. Awards were presented by Mayor Allan Pomerooy at the company's annual safety breakfast.

Lombard Bros. Trucking Co., Waterbury, Conn.—to 46 drivers. For their records of from one to eight years of no-accidents, the drivers got electric razors, radios and watches.

Southern Express Co., Cicero, Ill.—to four drivers. Individually, the records were 15, 12, 11 and 10 years of driving without accidents.

Stillpass Transit Co., Inc., Cincinnati, Ohio—to 15 drivers. Three had five-year no-accident records, five had two-year records and seven had one-year records.

Service Transport, Inc., Racine, Wis.—to 22 drivers. In addition to a pin, the drivers were awarded \$25 each.

Safeway Stores, Inc., Arizona—to 20 drivers. Included were 12 three-year no-accident records, four two-year records and four one-year records.

Hearin Tank Lines, Inc., Baton Rouge, La.—to 42 drivers. Awards

(TURN TO PAGE 210, PLEASE)

# REYCO

## Engineered

# BRAKE DRUMS

### WHAT STYLE

### DO YOU LIKE?



Top flight engineers agree that any **style** is satisfactory, providing that basic structural design is right.

That is where Reyco engineering becomes important to you! Reyco engineers know how and where to build in the extra strength to assure rigidity under pressure, provide full braking area contact and **uniformly controlled** expansion.

**REYCO METAL**

**+ PLUS**

**REYCO ENGINEERING**

**= EQUALS**

- SAFETY
- PERFORMANCE
- ECONOMY



COPYRIGHT, 1953 REYNOLDS MANUFACTURING CO.

## REYNOLDS MANUFACTURING CO.

SPRINGFIELD, MISSOURI

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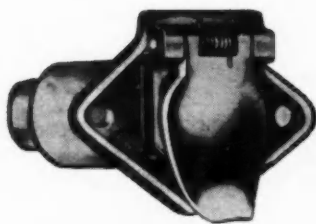
c., Baton  
Awards  
(LEASE)

June, 1953



# COLE-HERSEE

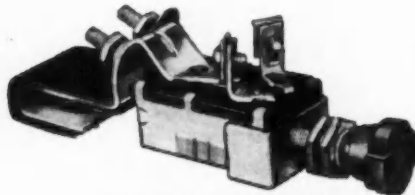
MANUFACTURES THE WORLD'S FINEST  
AUTOMOTIVE ELECTRICAL EQUIPMENT  
SWITCHES — TRAILER CONNECTORS — PLUGS & SOCKETS



No. 1220 A.T.A. Approved  
FLAP LOCK  
TRAILER CONNECTOR



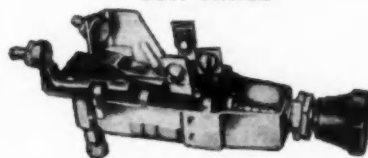
No. 9044 Push Button  
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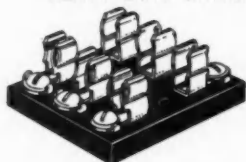
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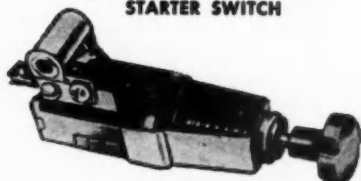
No. 5058 Moisture & Dustproof  
HEAVY DUTY SWITCH



No. 7123 Universal Fused  
HEADLAMP SWITCH



No. 4653 FUSE BLOCK



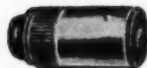
No. 6894 HEATER SWITCH



No. 2601 SOCKET



No. 2356 Beaver  
interior SOCKET



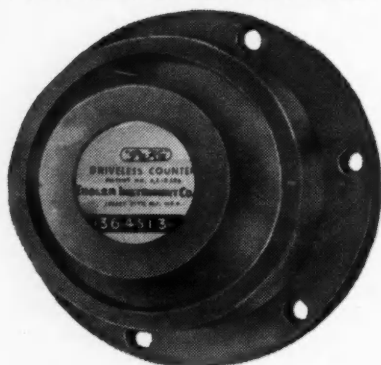
No. 1419 Plug

Manufacturers of  
CONSISTENTLY BETTER ELECTRICAL  
PRODUCTS FOR THE AUTOMOTIVE  
INDUSTRY

## COLE-HERSEE CO.

20 OLD COLONY AVE.,  
BOSTON 27, MASS.

## Guess how fast you can install a Pe-Ka Hubodometer



"You say this Pe-Ka Driveless Hubodometer can be installed in only a few minutes?"

"That's right, it's as simple as replacing a hubcap, and it can be used on any wheel, even on rear wheels of trucks and busses."



Pe-Ka Driveless Hubodometer provides positive mileage records for trailers, trucks, busses, graders, and cars.

A truck rental company uses it as a sealed check against speedometer readings.

A beer manufacturer uses it on trailers to check tire mileage, service records, and to control exchanged trailers.

A fleet operator uses it on trailers for preventive maintenance, tire records, and trailer mileage with various tractors.

Instrument is completely sealed against dirt, moisture. It is self-driving, self-lubricating, easy to read with figures straight across and always upright. Used and approved by leading trailer manufacturers.

Send for details

**ENGLER INSTRUMENT CO.**

252 Culver Ave.

Jersey City, N. J.

## June Roundup

Continued from Page 208

were made at the company's annual picnic.

Intercity Transportation Co., Brockton, Mass.—to 31 drivers. Two of the drivers, each with a 14 year safety record, received engraved wrist watches.

Buckingham Transportation, Inc., Rapid City, S. D.—to 20 drivers. One driver received a 300,000 mile award.

Bell Lines, Inc., Charleston, W. Va., —to 32 drivers. Top award, for 16 years of safe driving, was a wrist watch.

### New State Laws

Since last month's report, many more bills affecting truck and bus fleetmen have been enacted into law in the several states. Arranged alphabetically by state, they include:

**California:** S 1527—adding a section to Agricultural Code relative to inspection of vehicles used in transport of meat. H 2944—reducing length of poles or pipes that may be carried without a permit to 80 ft.

**Colorado:** H 250—providing for establishing ports of entry.

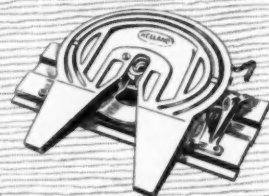
**Iowa:** H 222—exempting emergency utility repair equipment from maximum length requirements. S 388—eliminating tolerance in overweight violations. H 317—requiring new vehicles sold after Dec. 31, 1953, be equipped with front and rear turn signals. S 264—redefining chauffeur's license to include drivers of trucks over three tons. S 152—requiring certificate of public convenience and necessity for all motor carriers irrespective of route. S 388—increasing gross weights permitted under axle spacing table ranging from 32,000 lb for 4 ft spacing to 65,478 lb for 42 ft spacing; providing that no fine shall be levied if overweight does not exceed specified tolerance but, if it does, fine shall be computed on difference between actual weight and maximum legal weight. S 151—including as intrastate carriers those starting in Iowa for another point in the state although leaving the state en route. H 317—requiring reflectors on commercial vehicles to be visible between 500 to 50 ft. S 245—permitting emergency operation of overweight utility trucks.

**Kansas:** HCR 21—requiring vehicle owners to pay personal property tax at time of registration.

**Maine:** H 769—authorizing permits for movement of earth moving equipment over highways between construction projects. H 951—requiring headlights to be dimmed when following another vehicle closer than 100 ft. H 288—authorizing permits for moving heavy objects over highways. H 1050—providing discretion on part of courts in imposing jail sentence for over-

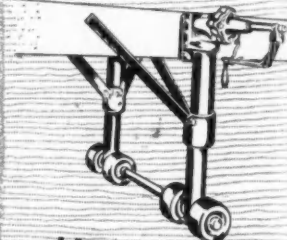
(TURN TO PAGE 212, PLEASE)

## ALWAYS A BLUE RIBBON PERFORMANCE



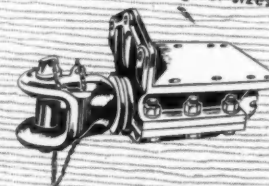
### FIFTH WHEELS

for every trucking application  
... including the famous Holland-Apgar Safety Fifth Wheel.



### LANDING GEAR

both vertical and horizontal  
in a complete range of sizes.



### PINTLE HOOKS

towing hooks, king pins and  
adapters, couplers or towing  
rings... the best that money  
can buy.

QUALITY PREFERRED  
FOR FORTY-ONE YEARS

**HOLLAND HITCH  
COMPANY**

HOLLAND



MICHIGAN



# AUTOPULSE

SINCE 1928

*PERFORMANCE PROVEN*

On passenger cars, on trucks and buses for a quarter of a century Autopulse Electric Fuel Pumps have delivered millions of miles of satisfactory and uninterrupted performance.

## THE AUTOPULSE ELECTRIC FUEL PUMP—

- is the ORIGINAL electric fuel pump.
- is the universal electric fuel pump.
- easily installed in any convenient location between the fuel tank and the carburetor.
- all component parts replaceable in the field.
- operates in any climate — at any temperature from 90° below zero up to evaporation point of fuel.
- works equally well at sea level or in extreme altitude territories.
- eliminates vapor lock when installed away from the heat of the engine if used as a pusher type pump.
- may be used separately or as an auxiliary fuel pump.
- only one model is needed on either negative or positive grounded vehicles — thus greatly simplifying inventories.
- rigid quality and production control assures you of an A-1 pump.
- sold and serviced through authorized distributors all over the world.

Autopulse, with its proven dependability, with its record of millions of miles of satisfactory performance is the pump for your installation.

QUALITY CONTROLLED • PRODUCTION CONTROLLED

**AUTOPULSE** *the heart of your motor*

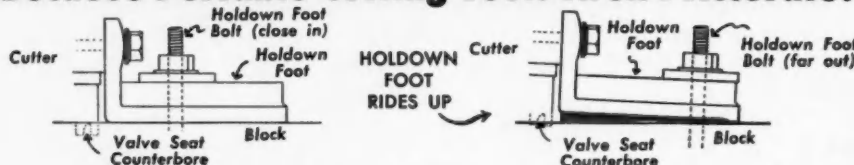
AUTOPULSE CORPORATION 218 E. Dowland St., Ludington, Mich.



# Why Are Replacement Valve Seats .008 or .010 Oversize?

(WHEN FACTORY REQUIREMENTS ARE ONLY .004)

## Because Portable Cutting Tools Aren't Accurate!



When the cutter is fed down, the foot will lift slightly even on the best equipment. If the bolt through the Holddown Foot is close to the fulcrum, a fairly accurate hole is made. The hole becomes larger and tapered when the bolt is moved farther from the fulcrum.

In use, the bolt position may change two or three times on the same cylinder head or block, and holes may vary from .001 to .006. This means that press fit interference varies from .002 to .010. The result is excessive press fit, which causes valve port cracks and distorted, cocked seats, which causes valve burning and breakage.

PETERSON'S



## SELF-LOCKING SCREW-IN VALVE SEAT WITH EXPANSION CLEARANCE

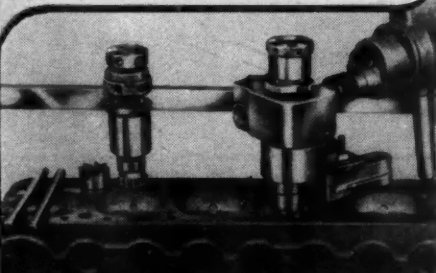
### Eliminates the problem of counterbore accuracy!

Even the heavy-duty P-B Holddown Foot allows oversize cuts, but it doesn't matter **BECAUSE THE COUNTERBORE IS THREADED**. P-B seats exert no radial pressure—even under extreme heat—due to clearance in threads. They eliminate cracks in valve ports common to some engines. P-B seats will stay round, where pressed seat (especially with excessive interference) distorts quickly. This causes valve failure. P-B gives 2 or 3 times longer valve life, since it cools the valve evenly around the head, where 75% of the heat should be dissipated. Distorted pressed-seat doesn't cool valve. The valve stem grows and sticks in guide. Cocked pressed-seat definitely causes most broken valves.

| NORMALIZED   | HEAT-TREATED   |
|--|--|
| <p>Made of tough chrome-nickel-iron, individually cast under pressure. Unlike pressed-in seats, P-B Screw-In Valve Seats retain their original dimensions, won't buckle and come loose, can't tilt and cause hot spots and valve burning, and allow for perfect seating of valve on every stroke.</p> <p>Under heat, it expands outward and slightly downward, becoming tighter.</p> | <p>Mechanics say pressed-in seats look like this before they start grinding.</p> |

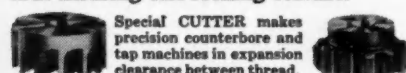
- **SAVES COSTLY BREAKDOWNS**—Eliminates 75% of valve burning, sticking, and breakage. Also eliminates 75% of valve port cracks due to radial pressure of expanding pressed-in seats—or valve port cracks in many heads where no seats are used.
- **REPLACE MANY TIMES**—You can replace

- **P-B seats without damaging the threads in counterbore or going to an oversize.**
- **NEW-ENGINE VALVE MILEAGE**—And the seat remains tight in the counterbore.
- **EASY TO REGRIND**—After long service just a light touch with the grinding stone cleans it up because it is not out of round.



### PRECISION INSTALLATION EQUIPMENT

Patented tooling guarantees threads square with bottom of counterbore, thus insuring self-locking feature.



### CONTACT YOUR MASTER SHOP TODAY

P-B Master shops are ready to help you solve your valve maintenance problems in every major U. S. city. Call him, or write direct.

**PETERSON WELDING LABS. INC.**

DEPT. C-6

1423 VIRGINIA

KANSAS CITY, MO.

## June Roundup

Continued from Page 210

weight violations. S 118—requiring trucks and buses to be equipped with turn signals when constructed or loaded so hand and arm signals are not visible front and rear.

Maryland: S 193—making it a criminal offense to refuse or neglect to pay proper charge due a common carrier. S 4—increasing to \$10/20/5000 proof of financial responsibility effective June 1, 1953. S 567—amending restrictions on explosives transport. H 351—permitting State Roads Commission to set speed limits for certain hours or certain days. S 506—restricting speed limit of trucks of 7500 lb GVW or more to 10 mph less than for other vehicles except in 35 mph zones. H 19—increasing registration fees; increasing motor fuel tax 1¢ per gal; increasing seat-mile tax and passenger seat tax.

Minnesota: S 1675—amending mudguard requirements to include trailers except pole trailers and dump trucks; prohibiting lamps or wiring on mudguards. H 346—requiring lights to be dimmed when approaching another vehicle from rear within 200 ft. H 1254—providing a maximum length of 45 ft for two units coupled together; limiting vehicles transporting telephone poles to 55 ft. S 1647—amends laws relative to overweight. H 21—increasing proof of financial responsibility for bodily injury or death of one person to \$10,000 and to \$20,000 for two or more persons in one accident. H 713—requiring excess size and weight vehicles be covered by liability policy. S 789—amending non-resident reciprocity privileges.

Nebraska: LB 548—amending definitions relative to motor carriers. LB 78—requiring automatic turn signals on vehicles made after Jan. 1, 1954. LB 364—authorizing suspension of operating privilege of those convicted of overweight violations 10 or more times in a 12 month period. LB 18—increasing amount of untaxed fuel that a vehicle may carry entering or leaving the state to 40 gal.

Nevada: S 117—requiring dealers to collect state excise tax on motor fuel at the pump from carriers who do not have fuel permit.

New Mexico: S 212—requiring semi-annual vehicle inspection at official inspection stations; requiring turn signals and stop light on all vehicles made after Jan. 1, 1954.

New York: H 1910—permitting buses operated wholly within a city a length of 40 ft if sanctioned by local law. H 2837—prohibiting commercial vehicles from going down grade with gears in neutral or clutch disengaged. S 2506—providing that highway use permit may be denied, suspended or revoked for failure to file return for purposes of tax.

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June, 1953

# DUMP TRUCK PERFORMANCE STARTS HERE



## with dependable *GarWood* "ROLLING WEDGE" ACTION

**H**ere, in the heart of the hoist, is where the years-ahead design of Gar Wood's famous "Rolling Wedge" cam and roller action pays off in superior performance and unmatched dependability. Exclusive "Rolling Wedge" cam and roller action provides built in control of oil pressure during the entire lifting cycle. Oil pressure remains uniform at all times—there are no sudden changes from low to high or from high to low. Pump life is substantially lengthened and sudden shocks to hydraulic system are eliminated.

Scientific cam design with exclusive, lift-proportioned cam contour provides maximum lifting effort at the start of the lift without increased hydraulic pressure. Reduced cam entering angle gives greater lifting effort with slower, smoother action at the start. Stresses to hoist and chassis are eliminated. As the rollers are forced deeper, cam contour changes to provide accelerated lifting as the center of the mass is moved towards

the discharge end of the body. Oil pressure remains uniform during this entire lifting cycle.

For smooth, dependable operation—and for longer service life in rugged dump-truck operation—specify Gar Wood "Load Engineered" Dump Bodies and Hoists when you buy new equipment. There's a size and type to fit your needs exactly. See your nearby Gar Wood dealer soon or write direct for complete specifications and application information.

Gar Wood Industries, Inc.  
36005 Main St., Wayne, Michigan  
Attn: Customer Service Dept.

2M108

Please send me complete information about Gar Wood Dump Bodies and Hoists for my hauling job.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Describe operation briefly \_\_\_\_\_

**GAR WOOD INDUSTRIES, INC.**  
WAYNE, MICHIGAN



TRUCK EQUIPMENT: Dump Truck Bodies and Hoists, Winders and Crows,  
Collection Units, Elevating End-Gates. CONSTRUCTION EQUIPMENT:  
Scrapers, Scrapers, Diggers, Ditchers, Spreaders, Finegraders, Truck-  
Mounted Road Graders.



# Diesel SERVICE EQUIPMENT



**NOZZLE TESTER**  
for Bosch  
Caterpillar  
International  
Harvester  
Injectors



**TEST FIXTURE**  
for GM 71  
Injectors  
Similar Fixture  
for GM 110  
Injectors also  
available



**TEST STAND**  
for  
Cummins  
Injectors



**COMPRESSION TESTER**  
for all Makes and  
Types of Diesels

Other Diesel Service Equipment:

- GM 71 DIESEL TOOLS
- NOZZLE CLEANING KITS
- VALVE LAPPING BLOCKS

BACHARACH INDUSTRIAL INSTRUMENT CO.  
7301 Penn Avenue • Pittsburgh 8, Penna.

Send complete information on your  
Diesel Testers and Service Tools

Name.....

Company.....

Address.....

## June Roundup

Continued from Page 212

**North Carolina:** H 588—providing penalties for axle weight violations but permitting a 1000 lb tolerance before penalties apply. S 325—permitting a 5 in. width tolerance for trucks transporting tobacco hogsheads. H 1115—authorizing Wake County to set speed and weight limits. S 410—permitting trucks hauling logs, bark, pulp, tannic acid, wood and other forest products to be licensed at one-half regular registration fees. H 90—prohibiting operation on highway of vehicles altered to increase speed. H 1161—requiring person leasing motor vehicles to secure liability insurance for owner and operator. H 622—making it unlawful to operate a vehicle so loaded as to obstruct driver's view. H 655—permitting auto transporters of 40,000 lb GVW or less a height of 13½ ft. S 220—making changes in definition of "contract carrier vehicles" and "owner" to aid licensing procedure for leased vehicles. S 166—providing a fee of \$1.00 for registration and 25¢ for annual re-registration of vehicles by the Public Utilities Commission.

**Oregon:** S 125—amending term "motor truck" to include property carrying vehicles of more than 6000 lb GVW; amending terms "truck-tractors," "trailers," "semi-trailers" and "pole" or "pipe

dollies" to include property carrying vehicles of combined weight of 4500 lb and providing that \$10 flat registration fee shall apply to such vehicles 6000 lb or less. H 594—redefining "Class D" under the weight-mileage tax to include trucks not purchasing sufficient fuel in Oregon to travel the extreme miles traveled within the state. H 540—requiring approved safety glass in all windows in vehicles made after Jan. 1, 1954, and that all replacements made after that date be of safety glass. H 540—regulates use of glazing materials in motor vehicles. H 595—providing restrictions on motor transportation on public highways.

**South Carolina:** H 1389—extending expiration date of additional tax on gasoline and fuel oil.

**Tennessee:** S 150—authorizing Safety Commissioner to issue permits for trucks loaded in excess of weight limits. S 924—redefining state's transportation policy relative to passenger fares. S 768—providing for repair liens on motor vehicles.

**Washington:** S 276—requiring turn signals on vehicles so constructed that distance from center top of steering post to left outside limit of body, cab or load exceeds 24 in., or when more than 14 ft to rear limit of body or load; prohibiting sale of motor vehicles after Jan. 1, 1954, unless equipped with automatic turn signals.

END

Please Resume Reading Page 64

## INVEST IN

# EASIER INSPECTION ...Faster Maintenance Work

Clean your engines and chassis with Magnusol. It's a fast, thorough operation, using unskilled labor, and costing you, for labor and materials, less than \$1 per vehicle. You'll save that dollar many times over in better use of high-priced inspection and maintenance manpower.

Magnusol is a concentrate, used mixed one part to eight of kerosene or safety solvent. You spray this solution at room temperature over engine and chassis surfaces. After a short soak-in period you rinse off with a pressure stream of water (also at room temperature), leaving bright, thoroughly cleaned surfaces. The whole operation takes about ½ hour per vehicle.

## SAFE Right Down the Line!

Magnusol is completely harmless to all metals and paint. It's safe for human skin, and has no unpleasant fumes. Above all, it's safe from the fire hazard point of view, for the cleaning solution is non-flammable.



## PROVE IT FOR YOURSELF!

Order 15 gallons of Magnusol and the Magnus Sprayer. If you are not satisfied with the results you get, after a 30-day trial, we'll gladly credit you with the full amount of your bill on the return of the unused Magnusol and the Sprayer.



**MAGNUS CHEMICAL CO., INC.**

38 South Ave., Garwood, N. J.

In Canada: Magnus Chemicals, Ltd., Montreal  
Service Representatives in Principal Cities

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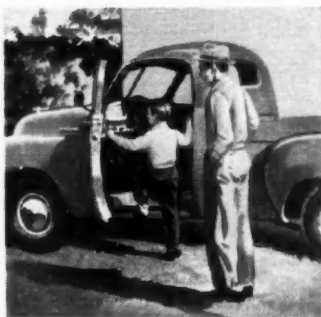
Decorative and other specifications subject to change without notice.

## Cut costs with a thrifty new Studebaker truck

Hundreds of thousands of Studebaker trucks are saving millions of dollars a year for their owners. Get your share of this economy jackpot. Switch over to a new 1953 Studebaker truck. Cut your gas costs—and your repair bills—as never before. Stop in and see your nearby Studebaker dealer.



You can park with ease in a Studebaker truck. Its variable-ratio steering gives you steadily increasing leverage as you turn the wheel. You get this feature in all Studebaker truck models from ½ ton to 2 ton.



Cab steps are enclosed inside the doors—a safeguard against slippery mud, muck and slush. Doors have automatic "hold-open" stops—close securely on tight-grip rotary latches. Big-vision windshield and windows.



It's a cinch to load and unload a Studebaker pick-up. You simply slide things on and off the low-level box. Studebaker trucks come in ½ ton, ¾ ton and 1 ton pick-ups or stakes and husky 1½ and 2-ton models. Choice of two great Studebaker truck engines—the high efficiency Econ-o-miser—the high torque Power-Plus.

## STUDEBAKER TRUCKS

© 1953, The Studebaker Corporation, South Bend 27, Indiana, U. S. A.

, June, 1953

COMMERCIAL CAR JOURNAL, June, 1953

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# Fleet Training Courses

FLEET training courses have shown themselves to be a cost cutting way in obtaining the trained men needed in truck and bus fleet operation. Here is a list of such courses scheduled throughout the United States. Additional listings are welcome.

## JUNE

- 8-10—Motor Carrier Claim Prevention Training Course, Michigan State College, East Lansing, Mich.
- 8-12—Motor Fleet Supervisor Training Course, University of Texas, Austin, Tex.
- 9-11—Motor Fleet Supervisor Refresher Conference, Northeastern University, Boston, Mass.
- 15-26—Course for Trainers of Commercial Drivers, Northeastern University, Boston, Mass.
- 15-19—Motor Fleet Supervisor Training Course, University of Texas, Austin, Tex.
- 22-26—Motor Fleet Supervisor Training Course, Northwestern University, Evanston, Ill.
- 22-26—Motor Fleet Supervisor Training Course, University of Texas, Austin, Tex.
- 25-26—Motor Fleet Supervisor Refresher Conference, Northwestern University, Evanston, Ill.

## AUGUST

- 31-Sept. 4—Motor Fleet Supervisor Training Course, University of Denver, Denver, Colo.

## SEPTEMBER

- 14-18—Motor Fleet Supervisor Training Course, Institute of Public Safety, Pennsylvania State College, State College, Pa.
- 21-25—Motor Fleet Supervisor Training Course, Purdue University, Lafayette, Ind.
- 28-Oct. 2—Course for Trainers of Commercial Drivers, University of Nebraska, Lincoln, Nebr.
- 28-Oct. 2—Preventative Maintenance Course for Fleets, Rutgers University, New Brunswick, N. J.
- 28-Oct. 2—Motor Fleet Supervisor Refresher Conference (tentative), University of Minnesota, Minneapolis, Minn.

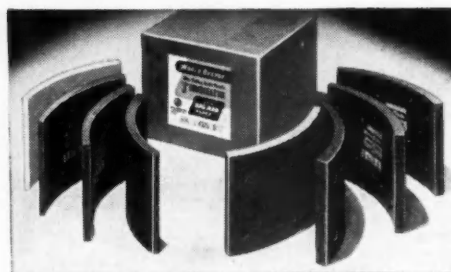
## OCTOBER

- 12-16—Course for Trainers of Commercial Drivers, Institute of Public Safety, Pennsylvania State College, State College, Pa.

## NOVEMBER

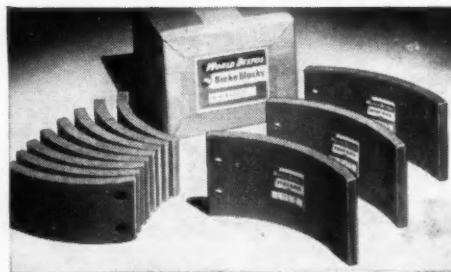
- 2- 6—Motor Fleet Supervisor Training Course, University of Illinois, Urbana, Ill.
- 2- 6—Course for Trainers of Commercial Drivers, University of Georgia, Athens, Ga.
- 9—Top Management Conference for Owners and Senior Executives of Motor Fleets, Institute of Public Safety, Pennsylvania State College, Philadelphia, Pa.
- 11—Top Management Conference for Owners and Senior Executives of Motor Fleets, Institute of Public Safety, Pennsylvania State College, Pittsburgh, Pa.
- 16-20—Motor Fleet Supervisor Training Course, University of Virginia, Charlottesville, Va.

6 million  
miles of proof



### World Bestos RED BLOCK with the famous "No-Fade" Guarantee

For extremely severe conditions. RED BLOCK in the "J" Combination is guaranteed non-fading (heat or water) . . . gives longer mileage and reduced drum wear. New Wiper-Edge now gives 10% more braking surface, keeps brake drums clean.



### World Bestos Brake Blocks for Heavy-Duty Trucks, Trailers and Buses

Blocks 1/2" thickness and over, in three different frictions covering all normal heavy duty requirements. Combinations may be used to assure maximum stopping power and long wear. New Wiper-Edge now gives 10% more braking surface, keeps drums clean.





# Pacific Supply Cooperative selects **WORLD BESTOS RED BLOCK**

...because it surpasses ALL OTHER BRAKE BLOCKS for

## GREATER SAFETY at LOWER OPERATING COST



PACIFIC SUPPLY COOPERATIVE

CHAS. BAKER, SECRETARY-MANAGER

HOME OFFICE - WALLA WALLA, WASHINGTON

P.O. BOX 1284, WALLA WALLA, WASHINGTON

Gifts Sent to This Address

February 3, 1953

World Bestos, Inc.  
New Castle, Indiana

Gentlemen:

We are operating 16 six-wheel tank truck and trailer units throughout the Northwest States of Washington, Oregon, Idaho, Montana, and Utah in the distribution of petroleum products to our retail Farmers Cooperative Units. To cover this large territory, we travel approximately 2,100,000 miles per year over all kinds of terrain in this Northwest.

This type of operation requires the best braking equipment obtainable which caused us to go through a period of testing several makes of the most popular brake blocks on the market. As a result of this test which ran for a period of two (2) years, we have settled on World Bestos and have equipped all of our units with your blocks. After three years, your lining has shown a very definite saving for our operation plus maximum safety from its excellent friction and no-fade qualities.

Your name, World Bestos, is all it implies and we recommend it highly to all fleet owners.

Sincerely,

PACIFIC SUPPLY COOPERATIVE

*Leonard Knowles*

By: Leonard Knowles, Supt.  
Transportation Dept.

LK/mp

● Performance on the job is the best proof of the service you can expect from the brake blocks you select for your fleet.

Pacific Supply Cooperative rolls more than 2 million miles a year over the mountains of five Northwestern states. World Bestos RED BLOCK, with the famous NO-FADE GUARANTEE, was chosen over all other heavy duty brake blocks for this extremely severe service. The selection was made after 2 years of testing leading makes of heavy-duty blocks.

Now, for three years . . . six million miles of service . . . RED BLOCK has provided maximum safety for the PSC fleet at a definite saving in operating cost. Experience is the strongest proof of RED BLOCK's superior performance. Many fleets, from coast to coast, report the same results wherever comparisons have been made.



**CALL** your World Bestos Distributor for complete information about RED BLOCK . . . or write direct to World Bestos, Heavy Duty Brake Division, New Castle, Indiana.

# WORLD BESTOS

NEW CASTLE, INDIANA

WB

# Arrow BULB and FUSE CONTAINER

Specifically designed to help you comply with ICC Regulation 193.95 (b) and (c)

Holds 8 fuses, 16 spare bulbs and 1 sealed beam unit in a foam rubber mounting that insulates against shock and vibration. Unique tapered shape makes container easy to handle, wedges sealed-beam unit tight, makes it easier to insert and remove bulbs. At your jobber's now.

N175 Bulb and Fuse Container. Height only 5 3/8". Diameter at widest point only 7 1/4". Baked on black enamel finish.



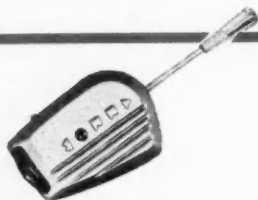
ASK YOUR JOBBER FOR ARROW PRODUCTS... THEY'RE THE BEST



39 Streamlined Marker Light



217-0 Reflector, with shatterproof plastic lens



N235 Automatic Cancelling Directional Signal Switch built for trucks and buses



N128 Magnalite Double-Faced Class "A" Signal

See the complete line of Arrow Safety After Dark Equipment. Get a free Arrow catalog from your jobber today.



Arrow Safety Device Company  
Mt. Holly, New Jersey



## New Products

Continued from Page 92

### P23. No Roll Device

Automotive Division, Wagner Electric Corp., St. Louis, Mo., announces a new, electric-type "NoRol," a safety device to prevent roll-back or creep when a vehicle stops on a hill or grade. It works automatically with the application of the brakes. Brakes are automatically released when the accelerator is touched. It fits all makes and models of cars with hydraulic brakes and equipped with a 6-volt electrical system. Operation is entirely automatic in normal driving.

### P24. Height Adjuster

Adjust-A-Truck, a device designed to raise or lower over-the-road carriers to dock height, has been introduced by Rowe Methods, Inc., Cleveland 13, Ohio. It is especially designed for those firms who do not have adequate room on their docks or in front of their docks to install adjustable dock ramps. The unit is set into the pavement in front of the dock and by means of heavy-duty electric hydraulic system, to adjust each vehicle to dock height. Its capacity is 40,000 lb. Standard deck size is 10 by 12 ft.

### P25. Battery Chargers

Willard Storage Battery Co., Cleveland, Ohio, has introduced a new line of battery charging equipment in 6 models designed to charge 6 or 12-volt batteries. Thermostatic Control featured on previous 6-volt chargers is offered on three of the new units.

### P26. Body Tool

"Kansas Jack" is the trade name of a new body and sheet metal tool group just announced by Bee Line Co., Davenport, Iowa. It is designed to work around obstructions and apply push or pull pressure. Range is from 1 lb to 1 ton. It can be used for pulling out dented panels, straightening bumpers, correcting sprung doors.

### P27. Hand Oiler

A new model hand oiler featuring controlled oil flow is announced by K-P Mfg. Co., Minneapolis, Minn. Model No. 510 has a 3/8 pint capacity and is equipped with a detachable heavy duty, 7 in. vertical steel tube spout with steel tip.

(TURN TO PAGE 258, PLEASE)